

Town of Groton



Capital Improvement Program Proposed FYE 2017 to FYE 2022

March 15, 2016

CAPITAL PROJECTS - FYE 2017 (000)

CAPITAL IMPROVEMENT PROGRAM

FYE 2017 TO FYE 2022

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CAPITAL PROJECTS - FYE 2017 (000)
CAPITAL IMPROVEMENT PROGRAM FYE 2017 to FYE 2022

March 15, 2016

Dear Members of the Town Council and Representative Town Meeting:

In accordance with the State Statutes, a proposed six-year Capital Improvement Program (CIP) for FYE 2017 to FYE 2022 is herewith submitted. The projects submitted for consideration include new construction, additions, major improvements and alterations, and new equipment for major projects in Town.

The Town prepares its CIP document applying two definitions of what constitutes a CAPITAL IMPROVEMENT:

- 1) "Capital Improvement" means a major improvement or betterment of a nonrecurring nature to the physical plant of the municipality as differentiated from ordinary repairs or maintenance of a recurring nature" (Connecticut General Statutes, Section 8-160); and
- 2) "Appropriations from the Fund Balance" (reserve fund for capital and nonrecurring expenditures) shall be made only for capital assets, projects or acquisitions of a nonrecurring nature with a cost of over \$25,000 and have a useful life expectancy of over five-years (Groton Code of Ordinances, Chapter 2, Section 2-1(C)).

The CIP is a long-term planning and policy document, coordinated by the Office of Planning and Development Services, which incorporates project proposals generated at the department level. They are evaluated and prioritized in terms of need, cost effectiveness, ability to generate economic benefit, and available sources of funding. The draft CIP was submitted to the Planning Commission for review and comment for conformance with Town objectives. The CIP document contains several parts.

- A Summary of the Capital Budget for those projects scheduled for FYE 2017 and included in the Town Manager's FYE 2017 Proposed Budget, followed by a summary of projects and funding sources for FYE 2017 to FYE 2022.
- A Program Summary for FYE 2017 to FYE 2022.
- Project Summaries for each of the ten project areas: Roads, Drainage and Watershed Protection, Sidewalks, Parks and Recreation, Education, Public Buildings, Technology, Planning and Economic Development, Energy Efficiency and Conservation, and Water Pollution Control Facility. Each area summary is followed by a Project Detail Sheet, which contains a brief description of the project, estimated cost, proposed method of financing, schedule of implementation, a statement of the impact on the operating budget, planning and engineering sources, and support of sustainability goals.

For FYE 2017, the proposed CIP expenditures total \$5,942,000. Of this amount \$2,872,000 will come from the Town's Capital Reserve Fund and \$3,070,000 will come from other sources including Water Pollution Control Facility user fees, State and Federal Grants, and Rebates or Third Party Interests.

A special word of thanks is extended to Jonathan Reiner, AICP, Director of Planning and Development; Gary Schneider, Director of Public Works; Deborah Jones, Assistant Director of Planning; Deb Gilot, Office Assistant III and Nicki Bresnyan, Executive Assistant for their assistance in preparing this year's Capital Improvement Program document.

Respectfully submitted,



Mark R. Oefinger, AICP
Town Manager

CAPITAL PROJECTS - FYE 2017 (000)						
PROJECT	Page #	Source of Funds			Other Funding Source	Total Costs
		Capital Reserve Fund	General Obligation Bonds	Other		
1) ROADS						
A) TOWN-WIDE PAVEMENT MANAGEMENT PROGRAM	7	\$ 79				\$ 79
B) TRAFFIC SIGNAL REPLACEMENT AND UPGRADE	8	\$ 30				\$ 30
C) ROUTE 1 - VERGENNES COURT	9			\$ 260	Local Road Accident Reduction Program	\$ 260
D) GROTON LONG POINT BRIDGE RECONSTRUCTION	10	\$ 250				\$ 250
H) NORTH STONINGTON ROAD BRIDGE	14	\$ 313		\$ 884	Stonington/Local Bridge Program	\$ 1,197
K) LOTCIP ROADWAYS AND INTERSECTIONS	18	\$ 160				\$ 160
SUBTOTAL		\$ 832		\$ 1,144		\$ 1,976
2) DRAINAGE AND WATERSHED PROTECTION						
A) CULVERT REHABILITATION	20	\$ 45				\$ 45
C) FISHTOWN ROAD IMPROVEMENTS	22	\$ 90				\$ 90
SUBTOTAL		\$ 135				\$ 135
3) SIDEWALKS						
A) MYSTIC STREETScape - PHASE III	24	\$ 15		\$ 60	HPP Grant	\$ 75
B) REPLACEMENT SIDEWALK CONSTRUCTION	25			\$ 100	LoCIP	\$ 100
SUBTOTAL		\$ 15		\$ 160		\$ 175
4) PARKS AND RECREATION						
B) TRAIL IMPROVEMENT PROGRAM	28	\$ 50				\$ 50
E) GOLF COURSE COMFORT STATION	31			\$ 50	LoCIP	\$ 50
K) NOANK DOCK	38	\$ 50				\$ 50
SUBTOTAL		\$ 100		\$ 50		\$ 150
5) EDUCATION						
A) SCHOOL REFERENDUM	41		TBD*			
I) CATHERINE KOLNASKI	49	\$ 127				\$ 127
J) MARY MORRISSON	50	\$ 80				\$ 80
K) NORTHEAST ACADEMY	51	\$ 84				\$ 84
SUBTOTAL		\$ 291				\$ 291
6) PUBLIC BUILDINGS						
C) TOWN HALL COMPLEX	57	\$ 100				\$ 100
L) LEASED BUILDINGS	66	\$ 75				\$ 75
SUBTOTAL		\$ 175				\$ 175
7) TECHNOLOGY						
A) NETWORK INFRASTRUCTURE UPGRADE	68			\$ 100	LoCIP	\$ 100
B) COMPUTER TECHNOLOGY ACQUISITION - SOFTWARE SYSTEMS	69	\$ 1,189				\$ 1,189
E) DISPATCH WORK STATION REPLACEMENT	72	\$ 35				\$ 35
SUBTOTAL		\$ 1,224		\$ 100		\$ 1,324
8) PLANNING AND ECONOMIC DEVELOPMENT						
A) ECONOMIC ASSISTANCE FUND	74	\$ 50				\$ 50
B) OPEN SPACE ACQUISITION	75	\$ 50				\$ 50
SUBTOTAL		\$ 100				\$ 100
9) ENERGY EFFICIENCY AND CONSERVATION						
A) LED STREETLIGHTS	78			\$ 465	Rebates/Third Party	\$ 465
SUBTOTAL				\$ 465		\$ 465
10) WATER POLLUTION CONTROL FACILITY						
A) SEWER LINE INFRASTRUCTURE REPAIR	81			\$ 51	WPCF User Fees	\$ 51
B) PUMP STATIONS	82			\$ 549	WPCF User Fees	\$ 549
C) TREATMENT FACILITY	84			\$ 551	WPCF User Fees	\$ 551
SUBTOTAL				\$ 1,151		\$ 1,151
TOTAL		\$ 2,872	\$ -	\$ 3,070		\$ 5,942
* No formal FYE 2017 budget action is requested on these items by the Town Council or RTM at this time. Projects are shown for information purposes only pending future action by the Town Council and RTM.						

CAPITAL PROJECTS - FYE 2017 to FYE 2022 (000)					
PROJECT	Source of Funds			Other Funding Source	Total Costs Over Six-Year CIP
	Capital Reserve Fund	General Obligation Bonds	Other		
1) ROADS					
A) TOWN-WIDE PAVEMENT MANAGEMENT PROGRAM	\$ 79	\$ 12,000			\$ 12,079
B) TRAFFIC SIGNAL REPLACEMENT AND UPGRADE	\$ 300			Local Road Accident Reduction Program	\$ 300
C) ROUTE 1 - VERGENNES COURT			\$ 260		\$ 260
D) GROTON LONG POINT BRIDGE RECONSTRUCTION	\$ 250	TBD			\$ 250
E) RETAINING WALL REPLACEMENT- MILITARY HIGHWAY	\$ 185				\$ 185
F) REPLACEMENT OF DEFECTIVE ROADSIDE BARRIER SYSTEMS	\$ 375				\$ 375
G) ROAD RECONSTRUCTION - MAIN STREET NOANK	\$ 75	TBD			\$ 75
H) NORTH STONINGTON ROAD BRIDGE	\$ 313		\$ 884	Stonington/ Local Bridge Program	\$ 1,197
I) CRYSTAL LAKE ROAD	\$ 65				\$ 65
J) ROAD UNDERPASSES	\$ 65	\$ 12,760			\$ 12,825
K) LOTCIP ROADWAYS AND INTERSECTIONS	\$ 360		\$ 3,820	LOTICIP	\$ 4,180
SUBTOTAL	\$ 2,067	\$ 24,760	\$ 4,964		\$ 31,791
2) DRAINAGE AND WATERSHED PROTECTION					
A) CULVERT REHABILITATION	\$ 295				\$ 295
B) LOCAL DRAINAGE IMPROVEMENTS/ NEW INSTALLATIONS	\$ 50				\$ 50
C) FISH TOWN ROAD IMPROVEMENTS	\$ 90		\$ 1,200	LOTICIP	\$ 1,290
SUBTOTAL	\$ 435	\$ -	\$ 1,200		\$ 1,635
3) SIDEWALKS					
A) MYSTIC STREETSCAPE - PHASE III	\$ 15		\$ 60	HPP Grant	\$ 75
B) REPLACEMENT SIDEWALK CONSTRUCTION	\$ 460		\$ 100		\$ 560
SUBTOTAL	\$ 475	\$ -	\$ 160		\$ 635
4) PARKS AND RECREATION					
A) FACILITIES IMPROVEMENTS	\$ 460				\$ 460
B) TRAIL IMPROVEMENT PROGRAM	\$ 443				\$ 443
C) OPEN SPACE MANAGEMENT PLAN	\$ 35				\$ 35
D) GOLF COURSE IMPROVEMENT PLAN	\$ 250				\$ 250
E) GOLF COURSE COMFORT STATION			\$ 50	LoCIP	\$ 50
F) AQUATICS CENTER	\$ 75				\$ 75
G) PARK IMPROVEMENT/ADA COMPLIANCE	\$ 285				\$ 285
H) MERRITT FIELD DEVELOPMENT		\$ 12,200			\$ 12,200
I) GOLF COURSE - IRRIGATION SATELLITES	\$ 40				\$ 40
J) NATURE BASED DISCOVERY AREA	\$ 60				\$ 60
K) NOANK DOCK	\$ 50				\$ 50
SUBTOTAL	\$ 1,698	\$ 12,200	\$ 50		\$ 13,948
5) EDUCATION					
A) SCHOOL REFERENDUM		TBD			\$ -
B) ASBESTOS REMOVAL	\$ 1,697				\$ 1,697
C) ADMINISTRATION BUILDING	\$ 2,528				\$ 2,528
D) CHARLES BARNUM	\$ 3,516				\$ 3,516
E) S. B. BUTLER	\$ 5,290				\$ 5,290
F) CLAUDE CHESTER	\$ 6,601				\$ 6,601
G) CUTLER MIDDLE SCHOOL	\$ 6,647				\$ 6,647
H) FITCH HIGH SCHOOL	\$ 3,543				\$ 3,543
I) CATHERINE KOLNASKI	\$ 127				\$ 127
J) MARY MORRISON	\$ 4,286				\$ 4,286
K) NORTHEAST ACADEMY	\$ 84				\$ 84
L) PLEASANT VALLEY	\$ 4,840				\$ 4,840
M) WEST SIDE MIDDLE SCHOOL	\$ 5,547				\$ 5,547
SUBTOTAL	\$ 44,706	\$ -	\$ -		\$ 44,706
6) PUBLIC BUILDINGS					
A) SPICER HOUSE - PARKS AND RECREATION OFFICE	\$ -				\$ -
B) HUMAN SERVICES BUILDING	\$ -				\$ -
C) TOWN HALL COMPLEX	\$ 100				\$ 100
D) GROTON PUBLIC LIBRARY			\$ 20	LoCIP	\$ 20
E) TOWN HALL ANNEX COMPLEX - FLEET AND ROADS/STREETS FACILITY	\$ 125				\$ 125
F) VACANT SCHOOL PROPERTIES	\$ -				\$ -
G) TOWN HALL ANNEX COMPLEX - PARKS MAINTENANCE BUILDING	\$ 25				\$ 25
H) JABEZ SMITH HOUSE	\$ 50				\$ 50
I) GOLF COURSE FACILITIES - MAINTENANCE BUILDING	\$ 165				\$ 165
J) CONSTRUCTION OF PERMANENT VEHICLE WASH FACILITY	\$ -				\$ -
K) GOLF COURSE FACILITIES - CLUB HOUSE	\$ 536				\$ 536
L) LEASED BUILDINGS	\$ 275				\$ 275
SUBTOTAL	\$ 1,276	\$ -	\$ 20		\$ 1,296
7) TECHNOLOGY					
A) NETWORK INFRASTRUCTURE UPGRADE	\$ 325		\$ 100	LoCIP	\$ 425
B) COMPUTER TECHNOLOGY ACQUISITION - SOFTWARE SYSTEMS	\$ 3,712				\$ 3,712
C) UPGRADE RADIO SYSTEMS-TOWN POLICE	\$ 300				\$ 300
D) PHONE SYSTEM	\$ 25				\$ 25
E) DISPATCH WORK STATION REPLACEMENT	\$ 35				\$ 35
SUBTOTAL	\$ 4,397	\$ -	\$ 100		\$ 4,497
8) PLANNING AND ECONOMIC DEVELOPMENT					
A) ECONOMIC ASSISTANCE FUND	\$ 550				\$ 550
B) OPEN SPACE ACQUISITION	\$ 250				\$ 250
C) MARKETING EXCESS TOWN PROPERTY	\$ 60				\$ 60
SUBTOTAL	\$ 860	\$ -	\$ -		\$ 860
9) ENERGY EFFICIENCY AND CONSERVATION					
A) LED STREETLIGHTS			\$ 465	Rebates/Third Party	\$ 465
B) SOLAR ARRAY			\$ 4,000	Third Party	\$ 4,000
SUBTOTAL	\$ -	\$ -	\$ 4,465		\$ 4,465
10) WATER POLLUTION CONTROL FACILITY					
A) SEWER LINE INFRASTRUCTURE REPAIR			\$ 3,253	WPCF User Fees	\$ 3,253
B) PUMP STATIONS			\$ 6,608	WPCF User Fees	\$ 6,608
C) TREATMENT FACILITY			\$ 3,521	WPCF User Fees	\$ 3,521
SUBTOTAL	\$ -	\$ -	\$ 13,382		\$ 13,382
TOTAL	\$ 55,914	\$ 36,960	\$ 24,341		\$ 117,215

CAPITAL PROJECTS - FYE 2017 (000)

FYE 2017 TO FYE 2022

PROGRAM SUMMARY (000)

ACTIVITY	SOURCE	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	TOTAL COST
1) ROADS	C,G,O	1976	12955	1725	13085	50	2000	31791
2) DRAINAGE AND WATERSHED PROTECTION	C,O	135	175	1325	0	0	0	1635
3) SIDEWALKS	C,O	175	210	250	0	0	0	635
4) PARKS AND RECREATION	C,G,O	150	12535	505	350	250	158	13948
5) EDUCATION	C	291	3974	8430	17066	4924	10021	44706
6) PUBLIC BUILDINGS	C,O	175	375	490	126	55	75	1296
7) TECHNOLOGY	C,O	1324	1081	1051	1041	0	0	4497
8) PLANNING AND ECONOMIC DEVELOPMENT	C	100	215	140	140	140	125	860
9) ENERGY EFFICIENCY AND CONSERVATION	O	465	4000	0	0	0	0	4465
10) WATER POLLUTION CONTROL FACILITY	O	1151	915	8044	1515	1757	0	13382
TOTAL	C,G,O	5942	36435	21960	33323	7176	12379	117215
Capital Reserve Fund	C	2872	7130	11116	19048	5369	10379	55914
General Obligation Bonds	G	0	24200	0	12760	0	0	36960
Other	O	3070	5105	10844	1515	1807	2000	24341

CAPITAL PROJECTS - FYE 2017 (000)

FYE 2017 TO FYE 2022

PROJECT SUMMARY (000)

1) ROADS	SOURCE	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	TOTAL COST
A) TOWN-WIDE PAVEMENT MANAGEMENT PROGRAM	C,G	79	12000	0	0	0	0	12079
B) TRAFFIC SIGNAL REPLACEMENT AND UPGRADE	C	30	270	0	0	0	0	300
C) ROUTE 1 - VERGENNES COURT	O	260	0	0	0	0	0	260
D) GROTON LONG POINT BRIDGE RECONSTRUCTION	C,G	250	0	TBD	0	0	0	250
E) RETAINING WALL REPLACEMENT- MILITARY HIGHWAY	C	0	185	0	0	0	0	185
F) REPLACEMENT OF DEFECTIVE ROADSIDE BARRIER SYSTEMS	C	0	125	125	125	0	0	375
G) ROAD RECONSTRUCTION - MAIN STREET NOANK	C,G	0	75	TBD	0	TBD	0	75
H) NORTH STONINGTON ROAD BRIDGE	C,O	1197	0	0	0	0	0	1197
I) CRYSTAL LAKE ROAD	C	0	65	0	0	0	0	65
J) ROAD UNDERPASSES	C,G	0	65	0	12760	0	0	12825
K) LOTCIP ROADWAYS AND INTERSECTIONS	C,O	160	170	1600	200	50	2000	4180
TOTAL	C,G,O	1976	12955	1725	13085	50	2000	31791
Capital Reserve Fund	C	832	785	125	325	0	0	2067
General Obligation Bonds	G	0	12000	0	12760	0	0	24760
Other	O	1144	170	1600	0	50	2000	4964

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
A) TOWN-WIDE PAVEMENT MANAGEMENT PROGRAM	1) ROADS

DESCRIPTION/PURPOSE/JUSTIFICATION

The Town is responsible for funding the entire road network of 128 center line miles (Town, City, and Groton Long Point) of accepted roads. A pavement management study was completed for the entire network. This formal evaluation provided a systematic, consistent approach to the evaluation of the present condition of the road surface. It is used to prioritize the repairs. It is not intended to replace sound engineering judgment, which should dictate specific needs for an individual project. All roads identified in this project fall under the definition of needing rehabilitation. This is defined as milling the top two inches of old asphalt from the surface and replacing with new asphalt or full depth reclamation, where the asphalt is ground up and mixed with the base to establish a new base and then resurfaced with three to five inches of new asphalt. Pavement maintenance and repair activities are not to be funded under this project. These are found in the operating budgets of the respective subdivisions.

A referendum was approved in November 2012 totaling \$11,200,000 to fund pavement management activities in the three areas of the Town for the next five years. The Town's portion is \$6,364,800, the City's portion is \$3,542,011, and Groton Long Point's portion is \$986,703.

Requested for FYE 17 are funds (\$79,000) to update the road inventories last completed in 2008.

Programmed for FYE 18 will be another bond referendum to continue the systematic, consistent approach for maintaining our roads. The Town's estimated cost for the next referendum is \$7,000,000, the City of Groton is \$3,900,000, and Groton Long Point is \$1,100,000.

Historical data for the Town shows a reduction of pavement area by 1% results in future savings in maintenance repair costs.

Engineering: In-house

Construction: Combination-Contractor for pavement recycling, in-house paving and restoration

Impact on operating budget: Funds for repairs can be reallocated to other roads increasing pavement ratings

Sustainability Goals: Goal 3 (reduce greenhouse gas)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C	79						79
B. Land and Right of Way								0
C. Construction	G		12000					12000
D. Equipment								0
E. Other Costs								0
Total	C,G	79	12000	0	0	0	0	12079

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
B) TRAFFIC SIGNAL REPLACEMENT AND UPGRADE	1) ROADS

DESCRIPTION/PURPOSE/JUSTIFICATION

The Town is responsible for traffic signals installed at the intersections of Town roads that control traffic from a driveway onto a Town road, or a driveway onto a State road, installed at the Town's request. All other locations are the responsibility of the State DOT. Currently, the Town has four intersections where traffic signals have been installed. Those are Military Highway/Crystal Lake Road, Gungywamp Road/Briar Hill Road, Poquonnock Road/Village Lane, and Route 1/Harry Day Drive. The traffic heads and controllers are becoming outdated and replacement circuit boards for the controllers are becoming rare.

Funds were approved in FYE 09 (\$35,000) for a consultant traffic engineer to review each of the intersections and prepare a report of the condition of existing equipment, the continuing need for the traffic signals, a recommended replacement schedule, and cost estimates. This report identified upgrades to Military Highway at Crystal Lake Road, Gungywamp Road at Briar Hill Road, Poquonnock Road at Village Lane, Route 1 at Harry Day Drive, and the elimination of a signal at Bridge Street at Kings Highway (completed). Funds were approved in FYE 14 (\$25,000) to complete the design of the replacement of the traffic signal at Gungywamp Road at Briar Hill Road and in FYE 16 (\$213,000) for engineering and construction.

Requested for FYE 17 are funds (\$30,000) for the design of a traffic signal replacement at the intersection of Poquonnock Road and Village Lane.

Programmed for FYE 18 are funds (\$270,000) for the traffic signal replacement at Poquonnock Road and Village Lane. The light at Crystal Lake Road will be addressed as part of its reconstruction. If approved, this will complete the upgrade to Town owned traffic signals.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: New LED signals reduce maintenance costs and save 80% in electricity

Sustainability Goals: Goal 1 (reduce overall energy use)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C	30						30
B. Land and Right of Way								0
C. Construction	C		270					270
D. Equipment								0
E. Other Costs								0
Total	C	30	270	0	0	0	0	300

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
C) ROUTE 1 - VERGENNES COURT	1) ROADS

DESCRIPTION/PURPOSE/JUSTIFICATION

The congestion in the area of the Bridge Market, Claude Chester School and Vergennes Court has led to a number of pedestrian and vehicle accidents. The marked increase of traffic on Route 1, the increased use of the recreational fields at Poquonnock Plains Park, and increased school traffic has caused near misses and traffic congestion, resulting in traffic backing up into the intersection of Route 1 and Route 117.

Funds were approved in FYE 05 for conceptual design/permitting/cost estimating for the Route 1 and Vergennes Court intersection improvements. This study was completed and concluded that the closure of this intersection will not adversely overload the remaining intersections in this neighborhood (Depot Road and Central Avenue). Additional funds were approved in FYE 14 to complete the design, permitting and construction to dead end Vergennes Court at Route 1, while still providing emergency vehicle and pedestrian access.

Requested for FYE 17 are construction funds (\$260,000) based on an estimate prepared by CONNDOT. Design, rights of way acquisition and 10% matching local funds are already approved (FYE 14). An application submitted to the Southeastern Connecticut Council of Governments for funds from CONNDOT's local Road Accident Reduction Program was approved subject to the availability of funds.

Engineering: Consultant
Construction: Contractor
Impact on operating budget: No impact
Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction	O	260						260
D. Equipment								0
E. Other Costs								0
Total	O	260	0	0	0	0	0	260

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other (Local Road Accident Reduction Program)

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
D) GROTON LONG POINT BRIDGE RECONSTRUCTION	1) ROADS

DESCRIPTION/PURPOSE/JUSTIFICATION

The Town of Groton retained AECOM (formerly URS Corporation) to prepare an engineering investigation and evaluation study of options for the rehabilitation or replacement of the Groton Long Point Bridge over Palmer's Cove, including the approach causeways. This study was necessitated by the deteriorating condition of the bridge and the concerns regarding the capability of the bridge and causeway to withstand a storm surge. The study was completed and presented to the Town Council in October 2013. Additional funds were allocated to refine the design of "Option 2" which calls for the replacement of the superstructure, repair of the causeway, rehabilitation of the substructure, and the installation of a separate sidewalk and elevated boardwalk.

Project limits extend from the intersection of East Shore Avenue to the Esker Point Beach main parking lot (crosswalk to crosswalk). In order for the Department to prepare for a bond referendum, additional work must be completed as follows:

Sidewalk: Determine whether the sidewalk should be on the north or south side of the bridge.

Undergrounding of Utilities: Electrical lines - Investigate the cost and determine if this would be grant reimbursable under Federal Bridge Program. Included would be low level street lighting along the causeway.

Grants: Explore whether portions of the entire project may be eligible under the Federal Bridge Program. The construction portion of the project is eligible for Local Transportation Capital Improvement Program (LOTICIP) funds and an application will be submitted to the Southeastern Connecticut Council of Governments. A municipality is responsible for engineering design and permitting for eligible projects. The State will provide construction funds.

Requested for FYE 17 are funds (\$250,000) to complete preliminary engineering for the project to prepare for a FYE 19 bond referendum for construction and to serve as the Town's portion of a LOTICIP project.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Goal 4 (adapt to climate change)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C	250						0 250
B. Land and Right of Way								0
C. Construction	G			TBD				0
D. Equipment								0
E. Other Costs				TBD				0
Total	C,G	250	0	TBD	0	0	0	250

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL								
PROJECT			ACTIVITY/DEPARTMENT					
E) RETAINING WALL REPLACEMENT- MILITARY HIGHWAY			1) ROADS					
DESCRIPTION/PURPOSE/JUSTIFICATION								
<p>The existing retaining walls along Military Highway are in need of replacement and/or repair. These walls were probably constructed when the road was built. Several sections of the walls are showing signs of distress, but remain stable.</p> <p>This section is at the intersection with Lestertown Road. Here, an 8 to 10 foot high mortar and stone wall supports the abutting properties. Failure here would close Lestertown Road and Military Highway and may also affect the water line.</p> <p>Programmed for FYE 18 are funds (\$10,000) for design and (\$175,000) for construction at the intersection with Lestertown Road.</p> <p>Engineering: In-house Construction: Contractor Impact on operating budget: No impact Sustainability Goals: Not applicable</p>								
RECOMMENDED FINANCING (000)								
	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C		10					10
B. Land and Right of Way								0
C. Construction	C		175					175
D. Equipment								0
E. Other Costs								0
Total	C	0	185	0	0	0	0	185
*Funding (C) Capital Reserve Fund (G) General Obligation Bonds (O) Other								

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
F) REPLACEMENT OF DEFECTIVE ROADSIDE BARRIER SYSTEMS	1) ROADS

DESCRIPTION/PURPOSE/JUSTIFICATION

Roadside barriers are longitudinal barriers used to prevent a vehicle from leaving the roadway and striking a fixed object or terrain feature that is considered more hazardous than the barrier itself. Many of the existing systems do not meet current standards and may even cause more damage than what they are intended to prevent. Therefore, Public Works is conducting an inventory and analysis of the condition of the existing systems. For each location, staff will review the most current information from the American Association of State Highway and Transportation Officials, U.S. Department of Transportation, Federal Highway Administration, and State of Connecticut Department of Transportation Form 816 to determine if a barrier system is required and, if so, determine the proper barrier system to be installed.

Programmed for FYE 18 are funds (\$125,000) to replace approximately 3,000 linear feet of defective barriers with metal beam barrier systems along Colonel Ledyard Highway, Fishtown Road, Flanders Road, and Groton Long Point Road (Town portion of the road). Repairs are required due to accident damage, not system failure. Replacement for outlying years will be based on the Town-wide inventory and analysis of condition completed by the Department of Public Works.

Programmed for FYE 19 and FYE 20 are funds (\$125,000/year) to continue this work.

Engineering: In-house
Construction: Contractor
Impact on operating budget: No impact
Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction	C		125	125	125			375
D. Equipment								0
E. Other Costs								0
Total	C	0	125	125	125	0	0	375

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL																																																																													
PROJECT G) ROAD RECONSTRUCTION - MAIN STREET NOANK				ACTIVITY/DEPARTMENT 1) ROADS																																																																									
<p style="text-align: center; margin: 0;">DESCRIPTION/PURPOSE/JUSTIFICATION</p> <p>This road has deteriorated to a point where it must be reconstructed. The cost effective strategy as defined in our Pavement Management Program is to perform rehabilitation and maintenance on any road whose Pavement Management Index is 50 or greater. This road falls below that level and is programmed for reconstruction under this separate project and funding.</p> <p>To properly reconstruct the pavement on Main Street, several components of the road must be addressed including drainage, sidewalks (existing and proposed), utilities, and the character of the road in relationship to the surroundings. These components must be chosen before design is started.</p> <p>Main Street is about 1,500 feet in length with widths varying from 28 to 39 feet. Existing drainage is a mix of catch basins and drainage swales. Existing sidewalks are concrete or asphalt with granite and asphalt curbing.</p> <p>Construction sequencing will be important to minimize the impact on the marinas and restaurants during the summer.</p> <p>Programmed for FYE 18 are funds (\$75,000) to prepare the concept plan for the reconstruction of the road. The cost of the concept plan has increased from the previous estimate based on the final costs of recently completed projects. If approved, design funds will be requested in FYE 19 with a bond referendum scheduled for November of 2020.</p> <p>Engineering: Consultant Construction: Contractor Impact on operating budget: Not applicable Sustainability Goals: Not applicable</p>																																																																													
RECOMMENDED FINANCING (000)																																																																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th rowspan="2">Source of Funds*</th> <th colspan="6">Estimated Funding by Year</th> <th rowspan="2">Total Estimated Cost</th> </tr> <tr> <th>FYE2017</th> <th>FYE2018</th> <th>FYE2019</th> <th>FYE2020</th> <th>FYE2021</th> <th>FYE2022</th> </tr> </thead> <tbody> <tr> <td>A. Planning and Engineering</td> <td style="text-align: center;">C</td> <td></td> <td style="text-align: center;">75</td> <td style="text-align: center;">TBD</td> <td></td> <td></td> <td></td> <td style="text-align: center;">75</td> </tr> <tr> <td>B. Land and Right of Way</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">0</td> </tr> <tr> <td>C. Construction</td> <td style="text-align: center;">G</td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">TBD</td> <td></td> <td style="text-align: center;">0</td> </tr> <tr> <td>D. Equipment</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">0</td> </tr> <tr> <td>E. Other Costs</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">0</td> </tr> <tr> <td>Total</td> <td style="text-align: center;">C,G</td> <td style="text-align: center;">0</td> <td style="text-align: center;">75</td> <td style="text-align: center;">TBD</td> <td style="text-align: center;">0</td> <td style="text-align: center;">TBD</td> <td style="text-align: center;">0</td> <td style="text-align: center;">75</td> </tr> </tbody> </table>										Source of Funds*	Estimated Funding by Year						Total Estimated Cost	FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	A. Planning and Engineering	C		75	TBD				75	B. Land and Right of Way								0	C. Construction	G					TBD		0	D. Equipment								0	E. Other Costs								0	Total	C,G	0	75	TBD	0	TBD	0	75
	Source of Funds*	Estimated Funding by Year						Total Estimated Cost																																																																					
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022																																																																						
A. Planning and Engineering	C		75	TBD				75																																																																					
B. Land and Right of Way								0																																																																					
C. Construction	G					TBD		0																																																																					
D. Equipment								0																																																																					
E. Other Costs								0																																																																					
Total	C,G	0	75	TBD	0	TBD	0	75																																																																					
<p>*Funding (C) Capital Reserve Fund (G) General Obligation Bonds (O) Other</p>																																																																													

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT
H) NORTH STONINGTON ROAD BRIDGE	1) ROADS

DESCRIPTION/PURPOSE/JUSTIFICATION

In March 2010 the North Stonington Road Bridge, which straddles Groton and Stonington, was in poor condition following a 500 year storm. Groton and Stonington hired an engineering firm to perform an inspection and load rating analysis of the bridge. The inspection revealed that the superstructure should be repaired or replaced, and a weight restriction was placed on the bridge. The condition of the bridge was not a result of the flooding.

Funding was approved in FYE 12 to design the repair work and the cost was shared 50/50 with Stonington. Groton's share for the design and construction of the repairs was \$50,000. Repair work began on the bridge in June 2012. It became clear that the deck would have to be replaced, something not anticipated at the start of work. Work stopped and the engineer estimated the cost of deck replacement to be \$200,000 or replacement of the entire superstructure to be \$750,000.

On March 31, 2014, with Town Council authorization, a settlement was reached with the original engineering firm for \$90,000. These funds were used to hire a consulting engineering firm to investigate the existing abutments and proposed alternatives to reestablish the bridge. That investigation has been completed and reviewed with the Town of Stonington.

A preliminary application has been submitted for a 47.79% grant through the State's Local Bridge Program for FYE 16. If approved, the Town and Stonington must commit to the project by June, 2016.

Programmed for FYE 17 are funds for design (\$142,000) and construction (\$1,055,000) to reestablish the bridge. It is estimated that the grant will cover \$571,000, with the remainder shared 50/50 between the towns of Groton and Stonington.

Engineering: Consultant
Construction: Contractor
Impact on operating budget: No impact
Sustainability Goals: None

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	O	105						105
	C	37						37
B. Land and Right of Way								0
C. Construction	O	779						779
	C	276						276
D. Equipment								0
E. Other Costs								0
Total	C,O	1197	0	0	0	0	0	1197

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other (Town of Stonington - \$313,000)
(Local Bridge Funding - \$571,000)

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
I) CRYSTAL LAKE ROAD	1) ROADS

DESCRIPTION/PURPOSE/JUSTIFICATION

This project will continue the improvements at the intersection of Route 12 and Crystal Lake Road, an intersection that provides a gateway to the Historic Ship Nautilus and Submarine Force Museum. Over 300,000 visitors annually visit the Nautilus and Museum. Crystal Lake Road is also the main entrance to the SUBASE with traffic counts of over 20,000 trips per day.

The current project to reconstruct Crystal Lake Road addresses many of the items recommended in the Groton Strategic Economic Development Plan for the Submarine Base Gateway Project. It provides geometric improvements, road resurfacing, and a bikeway link to Navy housing. However, it only addresses the northwest and southwest corners of the Crystal Lake Road and Route 12 intersection. The northeast and southeast corners of the intersection need similar improvements. The long queues on Route 12 turning west onto Crystal Lake Road must also be addressed. These improvements will complete the gateway project and provide a fitting entrance to these important sites.

Programmed for FYE 18 are funds (\$65,000) to prepare concept plans for improvements to Route 12 and the eastern portion of Crystal Lake Road at the intersection with Route 12 to address redundant driveway openings, new signals, proper turn radii, and street lighting.

Engineering: Consultant
Construction: Contractor
Impact on operating budget: No impact
Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C		65					65
B. Land and Right of Way								0
C. Construction								0
D. Equipment								0
E. Other Costs								0
Total	C	0	65	0	0	0	0	65

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
J) ROAD UNDERPASSES	1) ROADS

DESCRIPTION/PURPOSE/JUSTIFICATION

The Amtrak rail line overpasses at both Poquonnock Road (local road) and South Road (State Route 649) currently have less than 14' of vertical clearance. AASHTO - Geometric Design of Highways and Streets requires a minimum vertical clearance over an entire roadway width of 14' with an additional allowance for future resurfacing. Some roadways (defense use) are parts of systems or routes for which a minimum vertical clearance of 16' is required. The proximity of the Groton New London Airport (within a mile of both overpasses) and the Town emergency operations on these routes make the 16' vertical clearance desirable at these locations.

Both overpasses have been hit by trucks in the past. Additionally the South Road overpass has poor drainage and undergoes flooding from the nearby Poquonnock River.

In 2006, Purcell Associates was retained by the Town of Groton to conduct an engineering study to explore the feasibility and the associated impacts of increasing vertical clearances at these overpasses. A number of options were evaluated and funding sources were identified. These options and sources are identified in the 1L addendum sheet.

Programmed for FYE 18 are funds (\$65,000) to hire an engineering firm to investigate soils and drainage at both sites to further define the construction and engineering costs of lowering both of these roads.

Programmed for FYE 20 are funds to lower Poquonnock Road (\$1,600,000) and to raise the South Road overpass (\$11,160,000). These figures will be refined after the FYE 18 investigation. The construction of the project is listed as being funded by General Obligation Bonds, but other sources such as the Local Transportation Capital Improvement Program will be explored.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C		65					65
B. Land and Right of Way								0
C. Construction	G				12760			12760
D. Equipment								0
E. Other Costs								0
Total	C,G	0	65	0	12760	0	0	12825

*Funding

(C) Capital Reserve Fund

(G) General Obligation Bonds

(O) Other

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL (ADDENDUM)	
PROJECT	ACTIVITY/DEPARTMENT
J) ROAD UNDERPASSES	1) ROADS
ADDITIONAL INFORMATION	
<p>The options evaluated included the following:</p> <ul style="list-style-type: none"> A. Raising the overpass structure and regrading the rail approaches B. Lowering the roadway under the overpass C. A combination of both A and B above D. Replacing the existing overpass structure with shallower depth beams E. Obtaining the required vertical clearance while replacing the abutments to widen the roadway at the South Road overpass <p>Evaluation of each option included the development of a conceptual layout identifying the limits of construction along the railroad and/or the existing roadway and the potential impacts to adjacent properties or to other railroad structures as a result of the proposed changes to the existing railroad/roadway profiles. The evaluation included the consideration of relocating utilities either temporarily or on a permanent basis.</p> <p>The study researched potential State and Federal funding sources along with all necessary local, State, and Federal permits for each option. The following sources of funding (grants) were identified. It is important to note that most funding sources will still require the Town to come up with 20% of the total project costs as matching funds. It is likely that additional funding sources will be available for South Road because it is a state road.</p> <ul style="list-style-type: none"> A. Potential Funding Sources for South Road: <ul style="list-style-type: none"> 1. Southeastern Connecticut Council of Governments (SCCOG) 2. Surface Transportation Fund (STP- Anywhere) 3. Equity Bonus Program 4. Minimum Guarantee Program B. Potential Funding Sources for Poquonnock Road: <ul style="list-style-type: none"> 1. Southeastern Connecticut Council of Governments (SCCOG) 2. Surface Transportation Fund (STP- Urban or Other Urban) 	

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
K) LOTCIP ROADWAYS AND INTERSECTIONS	1) ROADS

DESCRIPTION/PURPOSE/JUSTIFICATION

The Local Transportation Capital Improvement Program (LOTICIP) provides State funds to urbanized area municipal governments in lieu of Federal funds. Applications are reviewed and endorsed by the Southeastern Connecticut Council of Governments (SCCOG). The local municipality is responsible for the engineering design and permitting for qualified projects. An application has been submitted for intersection improvements at Bridge Street and Kings Highway. This project will improve traffic circulation to accommodate the increased traffic volume that will result from 800 Electric Boat employees occupying the former Caldor Store at 9 Kings Highway. SCCOG has indicated that the project will be funded and it is estimated that the engineered design will cost \$160,000. Other projects that have been identified for LOTICIP applications include intersection improvements at Hazelnut Hill Road and Route 117 and raising the vertical clearance at the Amtrak overpass on Poquonnock Road.

Requested for FYE 17 are funds (\$160,000) for design and permitting of the Bridge Street and Kings Highway intersection improvements.

Programmed for FYE 18 are funds (\$170,000) for right of way acquisition associated with the Bridge Street/Kings Highway intersection improvements.

Programmed for FYE 19 are funds (\$1,600,000) for construction of the Bridge Street/Kings Highway improvements.

Programmed for FYE 20 are funds (\$200,000) for a LOTICIP application, design and permitting for the Hazelnut Hill Road/Route 117 intersection improvements.

Programmed for FYE 21 are funds (\$50,000) for right of way acquisition for the Hazelnut Hill Road/Route 117 intersection improvements.

Programmed for FYE 22 are funds (\$2,000,000) for construction of the Hazelnut Hill Road/Route 117 intersection improvements.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C	160			200			360
B. Land and Right of Way	O		170			50		220
C. Construction	O			1600			2000	3600
D. Equipment								0
E. Other Costs								0
Total	C,O	160	170	1600	200	50	2000	4180

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other (LOTICIP)

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
A) CULVERT REHABILITATION	2) DRAINAGE AND WATERSHED PROTECTION

DESCRIPTION/PURPOSE/JUSTIFICATION

There are several stream crossings in the town that need pipes replaced and/or the road crossing realigned/widened. The rain event of March 2010 highlighted the need to improve these crossings to prevent the isolation of neighborhoods and to provide access to these areas for emergency response. These projects will correct and renovate those stream crossings, making them safer for vehicles, adding protection for the watercourse and providing protection downstream of the road crossing in the case of overtopping. This project is consistent with the Town of Groton Hazard Mitigation Plan.

Requested for FYE 17 are funds (\$45,000) to engineer the replacement of the existing pipes and the widening of the road at the stream crossing on Pumpkin Hill Road. Preliminary investigation by the Department has determined that a portion of the road north of the stream crossing will require reconstruction and realignment to eliminate the overtopping of the road. A drainage analysis will be completed to properly design the system.

Programmed for FYE 18 are funds (\$125,000) for the replacement of the old stone culvert on River Road, opposite house #901. The existing culvert is in a deteriorated state and numerous temporary repairs have been made.

Programmed for FYE 19 are funds (\$125,000) for the replacement of the culvert on Quaker Farm Road. The existing stream crossing consists of twin 36" diameter pipes that would normally carry the flow. However, this area is home to beaver and the twin circular pipes provide an excellent base for their dam construction. These twin pipes would be replaced with a box culvert, providing the Department with an easier structure to clean and the opportunity to install a water "by-pass" structure to keep the water from overtopping the road. Also programmed for FYE 19 will be the construction funds (TBD) for Pumpkin Hill Road.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Goal 4 (adapt to climate change)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C	45						45
B. Land and Right of Way								0
C. Construction	C			TBD				
	C		125	125				250
D. Equipment								0
E. Other Costs								0
Total	C	45	125	125	0	0	0	295

*Funding

(C) Capital Reserve Fund

(G) General Obligation Bonds

(O) Other

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL																																																																													
PROJECT B) LOCAL DRAINAGE IMPROVEMENTS/ NEW INSTALLATIONS				ACTIVITY/DEPARTMENT 2) DRAINAGE AND WATERSHED PROTECTION																																																																									
<p style="text-align: center; margin: 0;">DESCRIPTION/PURPOSE/JUSTIFICATION</p> <p style="margin: 0;">This project funds local drainage system improvements or installation of new local drainage systems. Drainage systems are installed to control flooding, prevent erosion, improve water quality, and protect public and private property from damage. All new systems are designed to current Town of Groton Road and Drainage Standards. Protection of the watershed that drains to Groton's public water supply is critical to the sustainability of the Town's water supply, its political subdivisions and the region. In 2008, the Town, Groton Utilities, the State Department of Public Health, other towns, and interested stakeholders in the region developed the Southeastern Connecticut Drinking Water Quality Management Plan (DWQMP) to address the protection of Groton Utilities' public water supply and the economic development goals of the region. Both the DWQMP and the 2015 draft POCD update recommend that Town-owned stormwater basins and drainage structures be reviewed and retrofitted if necessary to improve water quality treatment.</p> <p style="margin: 0;">Programmed for FYE 18 are funds (\$50,000) to document the condition of all Town-owned stormwater basins in the public drinking water supply watershed and to design improvements to enhance the treatment of stormwater runoff to improve water quality. The funds will be used to provide a phased schedule and cost estimate for the required improvements in outlying years. Target measures would include retrofitting storm water quality basins, channels, leak-offs and other storm water improvement facilities within Town properties, easements, and roads that fall within the watershed.</p> <p style="margin: 0;">Programmed for FYE 19 through FYE 22 are funds (\$TBD/year) to construct or implement these improvements.</p> <p style="margin: 0;">Engineering: Consultant/In-house Construction: Contractor/In-house Impact on operating budget: No impact Sustainability Goals: Goal 5 (innovative storm water management) and Goal 4 (adapt to climate change)</p>																																																																													
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	Source of Funds*	Estimated Funding by Year						Total Estimated Cost																																																																					
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022																																																																						
A. Planning and Engineering	C		50					50																																																																					
B. Land and Right of Way								0																																																																					
C. Construction	C			TBD	TBD	TBD	TBD	TBD																																																																					
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E. Other Costs								0																																																																					
Total	C	0	50	0	0	0	0	TBD																																																																					
<div style="display: flex; justify-content: space-between;"> *Funding <div style="display: flex; gap: 20px;"> (C) Capital Reserve Fund (G) General Obligation Bonds </div> </div> <div style="display: flex; justify-content: center; margin-top: 5px;"> (O) Other </div>																																																																													

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
C) FISHTOWN ROAD IMPROVEMENTS	2) DRAINAGE

DESCRIPTION/PURPOSE/JUSTIFICATION

In previous years, this project was the reconfiguration of the intersection to correct the issue of vehicles crossing into the opposite traffic lane when making a right hand turn onto Fishtown Road from Route 1 and thus, was in the Roads section of the CIP. Recurring flooding events in recent years have effectively prevented east/west traffic movements through this intersection on Route 1 during these events. Due to this issue, the focus of this project was changed from road alignment to the correction of the flooding at this location. This project is consistent with the Town of Groton Hazard Mitigation Plan.

Eccleston Brook floods the intersection of Route 1, Noank Ledyard Road, and Fishtown Road even during minor rain storms. The flooding is exacerbated by an inefficient series of culverts north of the Valero Gas Station property and the drainage system south in Route 1. The brook was previously relocated during sewer line installation in the 1970s. The brook is home to a native brown trout population.

Approved in FYE 14 were funds (\$45,000) to identify alternatives to redesign the storm water system from Bel-Aire Drive south to the driveway crossing 113 Fishtown Road to include the best management practices for sediment removal. The consultant's study also examined the existing poor turning geometries and the lack of safe crossing for pedestrians and bicycles.

Requested for FYE 17 are funds for design and permitting (\$90,000) with construction programmed for FYE 19 (\$1,200,000). The Town will be applying for Local Transportation Capital Improvement Program (LOTICIP) funds from the State available through the Southeastern Council of Governments for construction. This program requires the Town to fund the design.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Goal 4 (adapt to climate change)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C	90						90
B. Land and Right of Way								0
C. Construction	O			1200				1200
D. Equipment								0
E. Other Costs								0
Total	C,O	90	0	1200	0	0	0	1290

*Funding

(C) Capital Reserve Fund

(G) General Obligation Bonds

(O) Other (LOTICIP)

CAPITAL IMPROVEMENT PROGRAM

FYE 2017 TO FYE 2022

PROJECT SUMMARY (000)

[illegible]

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
A) MYSTIC STREETScape - PHASE III	3) SIDEWALKS

DESCRIPTION/PURPOSE/JUSTIFICATION

After completion of Mystic Streetscape - Phase II, there is some funding available to complete a smaller Phase III project. Although Phase III was not originally envisioned as part of the streetscape project, it will allow the finishing of some sidewalks and other items not included in Phase I and Phase II. Projects under consideration include the completion of sidewalks along Noank Road from the Phase II project limits south to the intersection with High/Latham Streets and Fort Rachel Place; construction of sidewalks along the local portion of Water Street; and establishing a location to display the bull gears from the Mystic River Bascule Bridge.

Other potential projects being evaluated include addressing a low area in Gravel Street that floods during extremely high tides.

The funding for this project will be 80% Federal High Priority Project (HPP) grant and 20% matching funds, which will come from available State LoCIP funding. The balance of HPP and LoCIP funds upon the completion of Phase II will determine what can be accomplished in Phase III. The most recent discussions with CONNDOT indicate that a project in the range of \$1,000,000 may be feasible. This is subject to change based on the closeout of Phase II.

Requested for FYE 17 are funds (\$75,000) for the design of the chosen project(s).

Engineering: Consultant

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Goal 3 (reduce greenhouse gas) and Goal 4 (adapt to climate change)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C	15						15
	O	60						60
B. Land and Right of Way								0
C. Construction			TBD					0
D. Equipment								0
E. Other Costs								0
Total	C,O	75	TBD	0	0	0	0	75

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other (HPP Grant)

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
B) REPLACEMENT SIDEWALK CONSTRUCTION	3) SIDEWALKS

DESCRIPTION/PURPOSE/JUSTIFICATION

This project addresses the need to replace existing, deteriorating concrete and asphalt sidewalks. All replaced sidewalks will provide ramps to make them accessible to all users. This project funds large projects such as the replacement of an entire sidewalk network and small projects such as the replacement of an individual panel of deteriorated concrete or asphalt sidewalk. This project is in keeping with the policies identified in the Plan of Conservation and Development (page 118) to create an overall pedestrian network between and within activity nodes.

Requested for FYE 17 are funds (\$100,000) to replace the existing asphalt sidewalks on Midway Oval and Central Avenue. All the sidewalks are showing distress and this project is expected to take two years to complete.

Programmed for FYE 18 are funds (\$210,000) to complete the Midway Oval and Central Avenue sidewalk replacements.

Programmed for FYE 19 are funds (\$250,000) to replace all of the existing asphalt and the deteriorated portions of the concrete sidewalks on High Street, Mystic from the intersection with Godfrey Street to the intersection with New London Road with new concrete sidewalks. Existing granite curbing will be reset. Originally planned for FYE 17, this project has been pushed out to FYE 19 to allow Aquarion to complete the High Street water main replacement.

Engineering: In-house

Construction: Contractor/In-house

Impact on operating budget: No impact

Sustainability Goals: Goal 1 (reduce overall energy use) and Goal 2 (reduce greenhouse gas)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction	C		210	250				460
	O	100						100
D. Equipment								0
E. Other Costs								0
Total	C,O	100	210	250	0	0	0	560

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other (LoCIP)

CAPITAL IMPROVEMENT PROGRAM

FYE 2017 TO FYE 2022

PROJECT SUMMARY (000)

4) PARKS AND RECREATION	SOURCE	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	TOTAL COST
A) FACILITIES IMPROVEMENTS	C	0	0	360	100	0	0	460
B) TRAIL IMPROVEMENT PROGRAM	C	50	30	35	140	140	48	443
C) OPEN SPACE MANAGEMENT PLAN	C	0	35	0	0	0	0	35
D) GOLF COURSE IMPROVEMENT PLAN	C	0	50	50	50	50	50	250
E) GOLF COURSE COMFORT STATION	O	50	0	0	0	0	0	50
F) AQUATICS CENTER	C	0	75	0	0	0	0	75
G) PARK IMPROVEMENT/ADA COMPLIANCE	C	0	45	60	60	60	60	285
H) MERRITT FIELD DEVELOPMENT	G	0	12200	0	0	0	0	12200
I) GOLF COURSE - IRRIGATION SATELLITES	C	0	40	0	0	0	0	40
J) NATURE BASED DISCOVERY AREA	C	0	60	0	TBD	0	0	60
K) NOANK DOCK	C	50	0	0	0	0	0	50
TOTAL	C,G,O	150	12535	505	350	250	158	13948
Capital Reserve Fund	C	100	335	505	350	250	158	1698
General Obligation Bonds	G		12200	0	0	0	0	12200
Other	O	50	0	0	0	0	0	50

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL																																																																													
PROJECT				ACTIVITY/DEPARTMENT																																																																									
A) FACILITIES IMPROVEMENTS				4) PARKS AND RECREATION																																																																									
<p style="text-align: center; margin: 0;">DESCRIPTION/PURPOSE/JUSTIFICATION</p> <p>These projects include investments in various parks that are designed to provide space for healthy activities and opportunities for social interaction, help preserve natural resources, enhance community character and positively affect property values.</p> <p>Programmed for FYE 19 are funds (\$310,000) for Sutton Park improvements as identified in the Sutton Park Master Plan. Specific improvements include relocating and constructing the restroom building, utilizing energy efficient practices, constructing a shelter and playground, resurfacing the basketball court and replacing lighting with energy efficient lighting. The engineering and design will be done in-house.</p> <p>Programmed for FYE 19 are funds (\$50,000) to develop a Master Plan for Esker Point Beach. Based on the ADA Accessibility Report by Recreational Accessibility Consultants (RAC), there are a number of non-compliance issues that need to be addressed.</p> <p>Programmed for FYE 20 are funds (\$100,000) for construction at Esker Point Beach.</p> <p>Engineering: In-house/Contractor Construction: Contractor Impact on operating budget: No impact Sustainability Goals: Goal 1 (reduce overall energy use)</p>																																																																													
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<div style="display: flex; justify-content: space-between;"> *Funding <div> (C) Capital Reserve Fund (G) General Obligation Bonds (O) Other </div> </div>																																																																													

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
B) TRAIL IMPROVEMENT PROGRAM	4) PARKS AND RECREATION

DESCRIPTION/PURPOSE/JUSTIFICATION

In FYE 04, the Town completed a comprehensive Bicycle, Pedestrian and Trails Master Plan. In addition to enhancing the Town's recreational and physical fitness opportunities, the master plan will create an alternative transportation network of bikeways, sidewalks and trails that link neighborhoods to work and recreation destinations.

Approved for FYE 15 was \$25,000 to be used for matching trail grants. \$25,000 was also approved to identify opportunities to connect Depot Road to South Road and to Tower Road utilizing bikeways, bike-lanes, signage, and other bike amenities. A consultant has been chosen for this project and a final report is expected in March, 2016.

Requested for FYE 17 are funds (\$50,000) for an appraisal, acquisition of an easement, and construction of approximately 135 feet of bike path from the west end of the G&S Trolley Trail at Knoxville Court to Industrial Drive and for the restriping of Industrial Drive to Depot Road to accommodate bicycle traffic.

Programmed for FYE 18 are funds (\$30,000) for design and construction of a pedestrian bridge to connect Cutler Middle School to Beebe Woods. Constructing this bridge would complete the Cross Town Trail, a six mile trail that runs from Bluff Point to Town's End.

Programmed for FYE 19 are funds (\$35,000) to design and permit a bike path from the G&S Trolley Trail to Fitch High School.

Programmed for FYE 20 are funds (\$140,000) to start construction of the bike path from the G&S Trolley Trail to Fitch High School.

Programmed for FYE 21 are funds (\$140,000) to complete the bike path from the G&S Trolley Trail to Fitch High School.

Programmed for FYE 22 are funds (\$48,000) for a bike path from Knoxville Court to Sutton Park. This project would include a combination of widening the road and striping of Knoxville Court, Midway Oval and Central Avenue for a bike path via Route 1.

Engineering: In-house

Construction: In-house/Contractor

Impact on operating budget: Minimal impact

Sustainability Goals: Goal 3 (reduce greenhouse gas emissions and/or reduction of vehicle trips)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C			35				35
B. Land and Right of Way	C	15						15
C. Construction	C	35	30		140	140	48	393
D. Equipment								0
E. Other Costs								0
Total	C	50	30	35	140	140	48	443

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL								
PROJECT			ACTIVITY/DEPARTMENT					
C) OPEN SPACE MANAGEMENT PLAN			4) PARKS AND RECREATION					
DESCRIPTION/PURPOSE/JUSTIFICATION								
<p>The 2002 POCD and the 2015 draft POCD update both contain a recommendation to develop an Open Space Management Plan. The proposed plan will provide an inventory of resources on existing open spaces and provide a guide for future uses (such as trails, fields, community facilities) and management strategies (such as selective tree cutting, meadow mowing). Recommendations would also take into account uses on adjacent facilities.</p> <p>This plan will identify management strategies for some of the larger open space tracts throughout Groton. These areas include: Deerfield, Great Brook, River Road, Kiely, Mortimer Wright, Wolfbrook, Beebe Pond, Johl and open space properties adjacent to Pequot Woods, totaling over 236 acres.</p> <p>Smaller tracts will be addressed in the future.</p> <p>Programmed for FYE 18 are funds (\$35,000) to develop an Open Space Management Plan.</p>								
Engineering: Not applicable Construction: Not applicable Impact on operating budget: Not applicable Sustainability Goals: Goal 5 (protection of assets)								
RECOMMENDED FINANCING (000)								
	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C		35					35
B. Land and Right of Way								0
C. Construction								0
D. Equipment								0
E. Other Costs								0
Total	C	0	35	0	0	0	0	35
*Funding (C) Capital Reserve Fund (G) General Obligation Bonds (O) Other								

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
D) GOLF COURSE IMPROVEMENT PLAN	4) PARKS AND RECREATION

DESCRIPTION/PURPOSE/JUSTIFICATION

Shennecossett Golf Course is operated as a special revenue fund. It has been demonstrated that the revenue generated can support the golf course operations; however, it is not enough to support capital improvements.

Based on recommendations from the National Golf Foundation and the 2008 Master Plan from Mungeam Cornish Golf Design firm, a series of necessary facility improvements to the golf course were developed. The proposed FYE 18 through FYE 22 improvements reflect the plan's recommendations. To remain competitive in an increasingly tight golf market, Shennecossett needs to create a golfing experience that meets market demands. The project approved in FYE 15, which included improving the greens on the 10th and 11th holes, is complete.

Programmed for FYE 18 are funds (\$50,000) to restore bunkers near the 14th green to their original design, making the approach shot easier, thereby improving player experience and the pace of play. Fifty-four percent of golfers surveyed rated bunkers at Shennecossett average or below.

Programmed for FYE 19 through FYE 22 are funds (\$50,000/year) to continue course renovations designed to improve player experience:

FYE 19 Restore the bunker complex on the 4th green.

FYE 20 Build a new tee complex on the 18th tee and a forward tee on the 2nd tee.

FYE 21 Restore the bunker complex on the 5th green.

FYE 22 Restore the bunker complex on the 16th green.

Engineering: In-house/Contractor

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction	C		50	50	50	50	50	250
D. Equipment								0
E. Other Costs								0
Total	C	0	50	50	50	50	50	250

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL								
PROJECT			ACTIVITY/DEPARTMENT					
E) GOLF COURSE COMFORT STATION			4) PARKS AND RECREATION					
DESCRIPTION/PURPOSE/JUSTIFICATION								
<p>A proposed comfort station near the 9th hole will enhance the golfing experience by providing a convenient place to stop on the course. The station will help improve pace of play reducing travel time to the clubhouse. A third benefit is the provision of some shelter to golfers during a sudden storm.</p> <p>The comfort station is a prefabricated toilet building placed over a 1,000 gallon underground concrete collection vault. The building has windows for natural lighting and does not require plumbing or electricity.</p> <p>Requested for FYE 17 are funds (\$50,000) for construction of the comfort station.</p>								
<p>Engineering: In-house Construction: Contractor Impact on operating budget: Minimal impact Sustainability Goals: Not applicable</p>								
RECOMMENDED FINANCING (000)								
	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction	O	50						50
D. Equipment								0
E. Other Costs								0
Total	O	50	0	0	0	0	0	50
<p>*Funding (C) Capital Reserve Fund (G) General Obligation Bonds (O) Other (LoCIP)</p>								

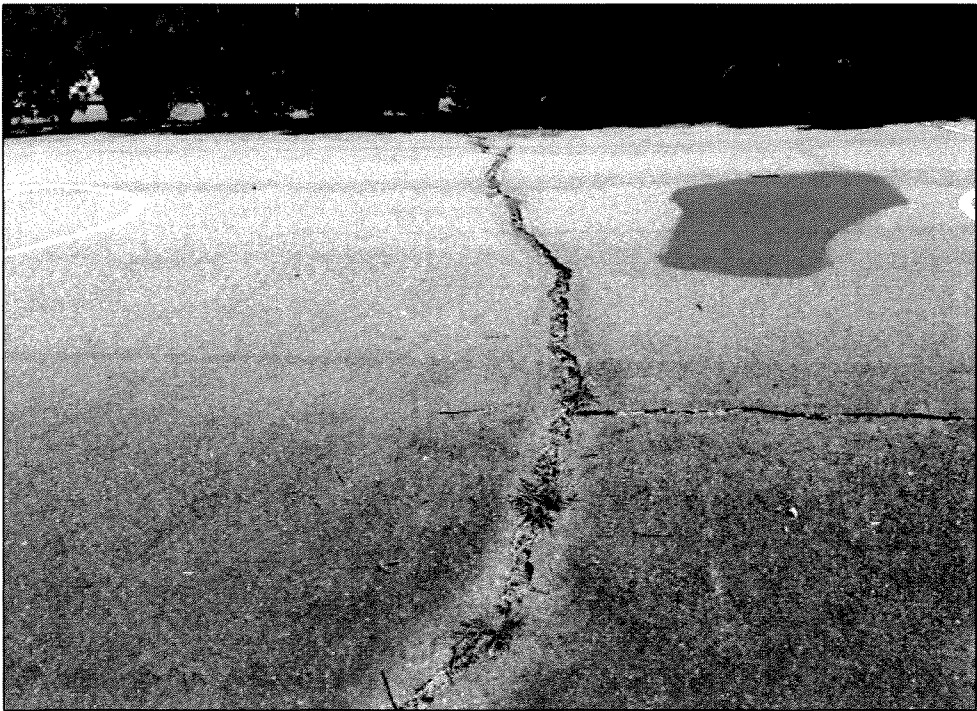
CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL								
PROJECT			ACTIVITY/DEPARTMENT					
F) AQUATICS CENTER			4) PARKS AND RECREATION					
DESCRIPTION/PURPOSE/JUSTIFICATION								
<p>The Recreation Master Plan completed in 2009 recommended the "initiation of a feasibility study for a multi-purpose indoor facility that would incorporate the highest need of the community – aquatics and recreational amenities".</p> <p>The investment in the development of an aquatics facility is an investment in the economic development of the Groton community. The availability of recreational facilities within a community directly impacts "quality of life" which is an important factor in retaining and attracting professional, educated, skilled workers for existing companies and is an important consideration in attracting new companies to the area.</p> <p>Information collected in the development of the Recreation Master Plan and aquatic user group meetings in 2012 disclosed a number of varied aquatic program needs.</p> <p>Programmed for FYE 18 are funds (\$75,000) for a feasibility study for development of an Aquatics Center. The success of a project such as this requires a study to create a detailed business plan that includes budgeting, marketing, and management planning.</p>								
<p>Engineering: Consultant</p> <p>Construction: Contractor</p> <p>Impact on operating budget: Unknown</p> <p>Sustainability Goals: Not applicable</p>								
RECOMMENDED FINANCING (000)								
	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C		75					75
B. Land and Right of Way								0
C. Construction								0
D. Equipment								0
E. Other Costs								0
Total	C	0	75	0	0	0	0	75
<p>*Funding (C) Capital Reserve Fund (G) General Obligation Bonds (O) Other</p>								

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL																																																																													
PROJECT			ACTIVITY/DEPARTMENT																																																																										
G) PARK IMPROVEMENT/ADA COMPLIANCE			4) PARKS AND RECREATION																																																																										
DESCRIPTION/PURPOSE/JUSTIFICATION																																																																													
<p>The Park Improvement Plan recommendations are based on the estimated life of a park asset, current life cycle, and calculated replacement cost. The plan strives to increase productivity by improving efficiency, service delivery, and values of park assets; and reducing down time, repair costs, and the initial capital costs associated with future asset replacement.</p> <p>The Americans with Disabilities Act (ADA) adopted new requirements for accessibility to park and recreation facilities that took effect in 2012. Based on a review of 31 recreational sites by Recreational Accessibility Consultants (RAC), an ADA Transitional Plan was developed. The plan outlines the corrective actions required and establishes a proposed timeline to complete the work.</p> <p>Approved in FYE 16 were funds (\$60,000) for the development of a Beach Management Plan and rebuilding stone walls in the Deerfield Subdivision that designate open space and private property. Both projects are underway. Completed ADA compliance projects include handicapped accessible picnic tables, benches, water fountains, restriping of parking lots and parking signs.</p> <p>Programmed for FYE 18 are funds (\$45,000) to:</p> <p>1) Repair the playing surface on the roller hockey rink adjacent to the Senior Center - \$20,000</p> <p>2) Replace the Tanglewood Park basketball court in the Tanglewood subdivision. Court surface has deep, wide cracks (see 4G Addendum) and has lifted in areas adjacent to the cracks. Project would also include an ADA compliant path from the parking lot to the court. - \$25,000</p> <p>Programmed for FYE 19 through FYE 22 are funds (\$60,000/year) to meet the calculated costs identified in the Park Improvement and ADA Transition Plans.</p> <p>Construction: Contractor</p> <p>Impact on operating budget: Minimal reduction in repair/maintenance costs</p> <p>Sustainability Goals: Goal 5 (protect assets)</p>																																																																													
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<p>*Funding (C) Capital Reserve Fund (G) General Obligation Bonds</p> <p style="padding-left: 400px;">(O) Other</p>																																																																													

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL (ADDENDUM)

PROJECT	ACTIVITY/DEPARTMENT
G) PARK IMPROVEMENT/ADA COMPLIANCE	4) PARKS AND RECREATION

ADDITIONAL INFORMATION
Tanglewood Park Basketball Court



CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT
H) MERRITT FIELD DEVELOPMENT	4) PARKS AND RECREATION

DESCRIPTION/PURPOSE/JUSTIFICATION

Funding for a Merritt Athletic Fields Needs Assessment and Master Plan was approved in FYE 14. The study was completed in FYE 15. The assessment identified the need for four full size multipurpose fields. The Master Plan was initiated with the goal of accommodating four full size regulation rectangles and one U10 rectangle for players under 10 years old, with all of the required parking and support amenities. The property could accommodate the necessary fields, parking, and support amenities. Since it is centrally located within the Town, it would become a "hub" of outdoor recreation space, linking Poquonnock Plains Park, Sutton Park, Grasso Tech, Fitch High School, GOSA's Merritt Family Forest, Mortimer Wright Preserve, Haley Farm, G&S Trolley Trail, and Bluff Point. The addition of the new fields will reduce the required maintenance at Poquonnock Plains Park.

The cost estimate for the Merritt Field Project is \$12,200,000. This project is shown for information purposes only pending future action by the Town Council and RTM.

Groton 2020, a plan developed by the School Facilities Initiatives Task Force, has identified the Merritt property as a location for a new middle school. If a November 2016 bond referendum to construct the school is approved, an alternative location for the fields will be found and a new plan for the fields will be developed.

Engineering: In-house/Contractor

Construction: Contractor

Impact on operating budget: Projected increase in annual operating cost of \$29,000

Sustainability Goals: Goal 1 (reduce overall energy use)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction	G		12200					12200
D. Equipment								0
E. Other Costs								0
Total	G	0	12200	0	0	0	0	12200

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT

1) GOLF COURSE - IRRIGATION SATELLITES

ACTIVITY/DEPARTMENT

4) PARKS AND RECREATION

DESCRIPTION/PURPOSE/JUSTIFICATION

Shennecossett Golf Course is operated as a special revenue fund. It has been demonstrated that the revenue generated can support the golf course operations; however, this is not enough to support capital improvements.

The irrigation system at the golf course has 11 control satellites around the property that house electronic equipment to remotely control over 500 sprinkler heads. Seven of these satellites were upgraded when the irrigation system was partially redone in 2002; the remaining four satellites were not upgraded. These steel cabinets are at least 40 years old and are deteriorated to the point that they are rusted through in many spots, including where they anchor to the concrete pad they sit on. The holes in the cabinets expose the internal electronics to moisture and possible rodent damage. The electronic components in these four satellites are 20 years old and are not comparable to the newer electronics in the other seven satellites.

Programmed for FYE 18 are funds (\$40,000) to upgrade the four older satellites on the course and the software package to control the irrigation system.

Engineering:

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction	C		10					10
D. Equipment	C		30					30
E. Other Costs								0
Total	C	0	40	0	0	0	0	40

*Funding

(C) Capital Reserve Fund

(G) General Obligation Bonds

(O) Other (LoCIP)

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT

J) NATURE BASED DISCOVERY AREA

ACTIVITY/DEPARTMENT

4) PARKS AND RECREATION

DESCRIPTION/PURPOSE/JUSTIFICATION

Many playground providers are moving to enhance their facilities with natural play elements to give children the opportunity to play in natural, semi-wild places. These playgrounds can include tree forts, climbing walls and natural water features.

The proposed nature-based play area will incorporate materials from the local environment to create a stimulating setting for discovery, adventure and play. The play area will conform to established playground safety standards and it will contain opportunities for people of all ages and abilities. The play area will be located in a setting that is well connected to the Town's trail system on a site that provides interesting and challenging natural features that can be enhanced with other features to provide a wide variety of natural experiences.

A committee of stakeholders will be formed to choose a location, materials and design for the play area. The committee will include experts on local nature, artists, parents and children, landscape designers, parks and recreation professionals and others.

Programmed for FYE18 is \$60,000 for engineering and design services.

Programmed for FYE 20 are funds (TBD) for construction of the Discovery area.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: Minimal impact

Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C		60					60
B. Land and Right of Way								0
C. Construction					TBD			0
D. Equipment								0
E. Other Costs								0
Total	C	0	60	0	TBD	0	0	60

*Funding

(C) Capital Reserve Fund

(G) General Obligation Bonds

(O) Other

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT
K) NOANK DOCK	4) PARKS AND RECREATION

DESCRIPTION/PURPOSE/JUSTIFICATION

The Noank Dock is a fixed platform style dock that requires on-going repairs and maintenance. Severe storms in 2011 and 2012 had significant impact on the dock's condition. Some of the stringers and decking are in poor condition and some pilings should be replaced. The proposal is to replace the dock and repair the seawall and rock rip-rap. During high tide, water washes away some of the soil behind the seawall causing sinkholes to develop along the shore.

Approved in FYE 14 were funds (\$20,000) for planning and engineering. Approved in FYE 16 were funds (\$106,000) for construction. The project was bid and all bids were higher than the available funding.

Requested for FYE 17 are additional funds (\$50,000) to allow the Public Works Department to place the project out to bid in October 2017 for construction in late fall. This will allow the facility to be used during the summer season and also bid the project at an opportune time to bid small projects such as this. The dock will be restructured using a "flow through" decking material and Greenhart piles (which are safer for the environment and eliminate preservative leachate) and it will be fully ADA compliant.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: Minimal reduction in repair and maintenance costs

Sustainability Goals: Goal 4 (adapt to climate change)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2016	FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction	C	50						50
D. Equipment								0
E. Other Costs								0
Total	C	50	0	0	0	0	0	50

*Funding

(C) Capital Reserve Fund

(G) General Obligation Bonds

(O) Other

CAPITAL IMPROVEMENT PROGRAM

FYE 2017 TO FYE 2022

PROJECT SUMMARY (000)

5) EDUCATION	SOURCE	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	TOTAL COST
A) SCHOOL REFERENDUM	G	TBD	0	0	0	0	0	0
B) ASBESTOS REMOVAL	C	0	1178	405	114	0	0	1697
C) ADMINISTRATION BUILDING	C	0	194	54	1523	338	419	2528
D) CHARLES BARNUM	C	0	185	224	867	582	1658	3516
E) S. B. BUTLER	C	0	185	100	2308	508	2189	5290
F) CLAUDE CHESTER	C	0	370	200	4941	100	990	6601
G) CUTLER MIDDLE SCHOOL	C	0	300	1912	3818	321	296	6647
H) FITCH HIGH SCHOOL	C	0	170	336	937	100	2000	3543
I) CATHERINE KOLNASKI	C	127	0	0	0	0	0	127
J) MARY MORRISON	C	80	822	446	561	1000	1377	4286
K) NORTHEAST ACADEMY	C	84	0	0	0	0	0	84
L) PLEASANT VALLEY	C	0	370	1673	1797	100	900	4840
M) WEST SIDE MIDDLE SCHOOL	C	0	200	3080	200	1875	192	5547
TOTAL	C	291	3974	8430	17066	4924	10021	44706
Capital Reserve Fund	C	291	3974	8430	17066	4924	10021	44706
General Obligation Bonds	G	0	0	0	0	0	0	0
Other	O	0	0	0	0	0	0	0

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL (ADDENDUM)	
PROJECT	ACTIVITY/DEPARTMENT
SCHOOL NEEDS SUMMARY	5) EDUCATION
ADDITIONAL INFORMATION	
<p>Projects for various system upgrades and replacement at the schools are listed on the individual facility project sheets. However, there are longer term needs to maintain the educational and functional adequacy that are summarized below. If the major school building projects recommended by the school facilities initiative pass referendum, some of the following projects may no longer be required.</p> <p><u>ELEMENTARY SCHOOLS</u></p> <p>The projects shown on the individual project sheets are intended to maintain the adequacy of the facilities in their present configuration. However, to meet educational adequacy needs in the future, Charles Barnum, Mary Morrisson, S.B. Butler, Claude Chester, and Pleasant Valley Schools will also require an expanded media center, a full-service kitchen, a larger cafetorium, a gymnasium, larger and redesigned administrative spaces, additional resource and remedial program spaces, appropriate instrumental and band program spaces, an art room, a space for the school based health center, and a larger space for the school nurse. In addition, the Board wanted to highlight that HVAC, ADA, and Fire Code upgrades requested over the last six years have not been funded.</p>	

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
A) SCHOOL REFERENDUM	5) EDUCATION

DESCRIPTION/PURPOSE/JUSTIFICATION

After the failure of the referendum on the Phase II school projects, a facilities and educational needs assessment was conducted to evaluate Groton educational facilities. The School Facilities Initiatives Task Force was formed in January 2013 to develop a plan (now known as 'Groton 2020') to continue the school facilities plan. The Middle School Educational Specifications provided to the Task Force by the Board of Education call for one middle school of grades 6 to 8, preferably located adjacent to the high school. Declining enrollment led the Board of Education to determine that only one middle school was needed to serve the Town. Three aging elementary schools -- Claude Chester, Pleasant Valley, and S. B. Butler -- will be closed and the two existing middle schools will be converted to elementary schools. The Educational Specification addresses important diversity and consolidation issues, responds to declining enrollments, and provides the delivery of a cost effective educational program.

Groton 2020 has identified the Merritt property, a 35 acre site next to the high school, as the preferred site for the new middle school. This land was purchased for recreational purposes and partially funded by a Department of Energy and Environmental Protection (DEEP) grant. The Town is working with DEEP to find a suitable open space parcel to substitute for the Merritt property so that it can be used for school purposes. The three vacated elementary schools will be returned to the Town for future disposition.

While the project cost for Groton 2020 is approximately \$195,000,000, efforts are underway to identify potential cost saving alternatives. A November 2016 referendum is anticipated. No formal FYE 2017 budget action is requested by the Town Council or RTM at this time. The project is shown for informational purposes only pending future action by the Town Council and RTM.

Engineering: Consultant
Construction: Contractor
Impact on operating budget:
Sustainability Goals:

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	G	TBD						0
B. Land and Right of Way								0
C. Construction	G	TBD						0
D. Equipment								0
E. Other Costs								0
Total	G	TBD	0	0	0	0	0	0

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
B) ASBESTOS REMOVAL	5) EDUCATION

DESCRIPTION/PURPOSE/JUSTIFICATION

This is a project to complete removal of non-friable asbestos from all schools. This is a solid form of asbestos that does not mix easily with air unless damaged or abraded. Although the State does not require removal of non-friable asbestos in good condition, the Asbestos Emergency Hazard Response Act (AEHRA) requires all damaged asbestos-containing material to be removed. In the past, each summer the damaged areas of non-friable asbestos were abated as they occurred, but a considerable amount of floor tile in all schools (except Pleasant Valley, Mary Morrisson, Northeast Academy, and Catherine Kolnaski) is cracked due to age and considered a health risk. It is no longer practical to do small repairs since the problem is escalating with the age of the schools. The cost of removal/abatement decreases with the size of the project.

Programmed for FYE 18 are funds (\$370,000) for Fitch High School, (\$408,000) for West Side Middle and (\$400,000) for S. B. Butler for asbestos abatement.

Programmed for FYE 19 are funds (\$405,000) for abatement in Cutler Middle.

Programmed for FYE 20 are funds (\$114,000) for abatement in the Administration Building (which does impact a limited number of students).

State Department of Education Grants may reimburse approximately 50% of project costs. The State requires local approval of entire project funding to apply for the grant. If CIP funding is approved, Groton Public Schools will apply and reimbursed funds will be returned to the Capital Reserve Fund.

Engineering: Consultant

Construction: Contractor

Impact on operating budget:

Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction	C		1178	405	114			1697
D. Equipment								0
E. Other Costs								0
Total	C	0	1178	405	114	0	0	1697

*Funding

(C) Capital Reserve Fund

(G) General Obligation Bonds

(O) Other

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL	
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PROJECT	ACTIVITY/DEPARTMENT
C) ADMINISTRATION BUILDING	5) EDUCATION

DESCRIPTION/PURPOSE/JUSTIFICATION	
1	1
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100	100

The Administration Building was originally an elementary school built in 1956. Continued effective use of this building will require removal of non-friable asbestos floor tile, fire code and handicapped accessibility code compliance, replacement of the steam heating system, replacement of the windows, plumbing and electrical upgrades, and improved security. If major upgrades to the facility require the installation of sprinklers, a water tank will be necessary.

Programmed for FYE 18 are funds (\$194,000) for plans and specifications for an HVAC system. The existing steam heating system is inefficient and prone to failure. This building is not properly ventilated or heated. Programmed for FYE 19 are funds (\$54,000) for the development of plans and specifications to address fire code deficiencies.

Programmed for FYE 20 are funds (\$154,000) to correct fire code deficiencies; (\$1,285,000) for HVAC installation; and (\$84,000) for plans and specifications to address ADA issues.

Programmed for FYE 21 are funds (\$238,000) to correct ADA issues and (\$100,000) for engineering of electrical upgrades.

Programmed for FYE 22 are funds (\$419,000) to update the electrical system.

These projects may be unnecessary if Fitch Middle School is renovated to include space for the Board of Education Administration.

State Department of Education Grants may reimburse approximately 50% of the Town's assigned reimbursement rate for administration building project costs. The State requires local approval of entire project funding to apply for the grant. If CIP funding is approved, Groton Public Schools will apply and reimbursed funds will be returned to the Capital Reserve Fund.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Goal 1 (reduce overall energy use) and Goal 2 (transition to renewable energy)

RECOMMENDED FINANCING (000)	
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99	100

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C		194	54	84	100		432
B. Land and Right of Way								0
C. Construction	C				1439	238	419	2096
D. Equipment								0
E. Other Costs								0
Total	C	0	194	54	1523	338	419	2528

*Funding	(C) Capital Reserve Fund	(G) General Obligation Bonds
		(O) Other

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
D) CHARLES BARNUM	5) EDUCATION

DESCRIPTION/PURPOSE/JUSTIFICATION

The Town Council and Board of Education agree that it is cost effective to keep Charles Barnum in use. Continued safe and effective use requires fire code improvements, handicapped accessibility code compliance, replacement of temporary classroom space with a permanent addition, central air conditioning and ventilation, and electrical upgrades.

Programmed for FYE 18 are funds (\$185,000) for plans and specifications for improvements to HVAC and handicapped (ADA) accessibility.

Programmed for FYE 19 are funds (\$224,000) for construction to address fire code issues. Design funding was approved in FYE 13.

Programmed for FYE 20 are funds (\$446,000) for HVAC installation and (\$421,000) for ADA construction.

Programmed for FYE 21 are funds (\$582,000) to develop plans and specifications to replace temporary classrooms with a permanent addition and for engineering to design upgrades to the electrical system.

Programmed for FYE 22 are funds (\$1,658,000) for construction of a permanent addition and replacement of the electrical system.

State Department of Education Grants may reimburse approximately 50% of ADA, fire code, and classroom addition project costs. The State requires local approval of entire project funding to apply for the grant. If CIP funding is approved, Groton Public Schools will apply and reimbursed funds will be returned to the Capital Reserve Fund.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Goal 1 (reduce overall energy use) and Goal 2 (transition to renewable energy)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C		185			582		767
B. Land and Right of Way								0
C. Construction	C			224	867		1658	2749
D. Equipment								0
E. Other Costs								0
Total	C	0	185	224	867	582	1658	3516

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds (O) Other

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL								
								PRIORITY 2
PROJECT				ACTIVITY/DEPARTMENT				
E) S. B. BUTLER				5) EDUCATION				
DESCRIPTION/PURPOSE/JUSTIFICATION								
<p>Studies undertaken by the Town Council and the Board of Education agree that a full renovation and expansion of this facility would not be cost effective. These projects may be unnecessary if the school construction bond referendum passes.</p> <p>Programmed for FYE 18 are funds (\$85,000) for plans and specifications to address fire code deficiencies and (\$100,000) for development of plans and specifications for HVAC.</p> <p>Programmed for FYE 19 are funds (\$100,000) for engineering to update the outdated electrical system.</p> <p>Programmed for FYE 20 are funds (\$497,000) for fire code construction; (\$268,000) for HVAC construction; (\$1,399,000) for electrical system construction; (\$35,000) for plans and specifications pertaining to ADA structural issues; and (\$109,000) for plans and specifications to address roof issues.</p> <p>Programmed for FYE 21 are funds (\$99,000) for ADA construction; (\$309,000) for roof construction; and (\$100,000) for development of plans and specifications to address building structural issues.</p> <p>Programmed for FYE 22 are funds (\$749,000) for (building structural) construction and (\$100,000) for plans and specifications to replace the three temporary classrooms with permanent space. Also programmed for FYE 22 are funds (\$1,340,000) for construction of permanent space.</p> <p>State Department of Education grants may be available to reimburse approximately 50% of all costs associated with the fire code, ADA, and roof projects. The State requires that funding for the entire project be approved locally prior to applying for the grant. If CIP funding is approved, Groton Public Schools will apply for the grant and reimbursed funds will be returned to the Capital Reserve Fund.</p> <p>Engineering: Consultant Construction: Contractor Impact on operating budget: No impact Sustainability Goals: Goal 1 (reduce overall energy use) and Goal 2 (transition to renewable energy)</p>								
RECOMMENDED FINANCING (000)								
	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C		185	100	144	100	100	629
B. Land and Right of Way								0
C. Construction	C				2164	408	2089	4661
D. Equipment								0
E. Other Costs								0
Total	C	0	185	100	2308	508	2189	5290
*Funding (C) Capital Reserve Fund (G) General Obligation Bonds (O) Other								

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
F) CLAUDE CHESTER	5) EDUCATION

DESCRIPTION/PURPOSE/JUSTIFICATION

Studies undertaken by the Town Council and Board of Education agree that a full renovation and expansion of this facility would not be cost effective. These projects may be unnecessary if the school construction bond referendum passes.

Programmed for FYE 18 are funds (\$85,000) for plans and specifications to address fire code deficiencies; (\$85,000) for plans and specifications to address ADA issues; and (\$200,000) for plans and specifications relating to an HVAC system.

Programmed for FYE 19 are funds (\$200,000) for plans and specifications for electrical upgrades.

Programmed for FYE 20 are funds (\$772,000) for fire code construction; (\$445,000) for ADA construction; (\$2,488,000) for HVAC construction; and (\$1,236,000) for electrical system construction.

Programmed for FYE 21 are funds (\$100,000) for plans and specifications to address structural issues.

Programmed for FYE 22 are funds (\$990,000) for (structural) construction.

State Department of Education Grants may reimburse approximately 50% of ADA and fire code project costs. The State requires local approval of entire project funding to apply for the grant. If CIP funding is approved, Groton Public Schools will apply and reimbursed funds will be returned to the Capital Reserve Fund.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Goal 1 (reduce overall energy use) and Goal 2 (transition to renewable energy)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C		370	200		100		670
B. Land and Right of Way								0
C. Construction	C				4941		990	5931
D. Equipment								0
E. Other Costs								0
Total	C	0	370	200	4941	100	990	6601

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds (O) Other

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL																																																																													
PROJECT				ACTIVITY/DEPARTMENT																																																																									
G) CUTLER MIDDLE SCHOOL				5) EDUCATION																																																																									
<p style="text-align: center; margin: 0;">DESCRIPTION/PURPOSE/JUSTIFICATION</p> <p>Studies undertaken by the Town Council and the Board of Education agree that it is cost effective to keep Cutler Middle School in use. Continued effective use requires fire code compliance, ADA accessibility, a redesigned and expanded parking lot, removal of non-friable asbestos floor and ceiling tile, window replacement, air conditioning and ventilation, electrical and plumbing upgrades, and improved security. These projects may be unnecessary if the school construction bond referendum passes.</p> <p>Programmed for FYE 18 are funds (\$100,000) for plans and specifications to address ADA issues and fire code deficiencies and (\$200,000) for plans and specifications for HVAC.</p> <p>Programmed for FYE 19 are funds (\$1,742,000) for ADA and fire code construction (\$170,000) for plans and specifications for a replacement electrical system.</p> <p>Programmed for FYE 20 are funds (\$1,470,000) for HVAC construction; (\$2,272,000) for electrical system construction; and (\$76,000) for plans and specifications to address structural issues.</p> <p>Programmed for FYE 21 are funds (\$217,000) for (structural) construction and (\$104,000) for plans and specifications for a larger parking lot including a separate parent drop off area.</p> <p>Programmed for FYE 22 are funds (\$296,000) for parking lot construction.</p> <p>State Department of Education Grants may reimburse approximately 50% of project costs. The State requires local approval of entire project funding to apply for the grant. If CIP funding is approved, Groton Public Schools will apply and reimbursed funds will be returned to the Capital Reserve Fund.</p> <p>Engineering: Consultant Construction: Contractor Impact on operating budget: No impact Sustainability Goals: Goal 1 (reduce overall energy use) and Goal 2 (transition to renewable energy)</p>																																																																													
RECOMMENDED FINANCING (000)																																																																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th rowspan="2">Source of Funds*</th> <th colspan="6">Estimated Funding by Year</th> <th rowspan="2">Total Estimated Cost</th> </tr> <tr> <th>FYE2017</th> <th>FYE2018</th> <th>FYE2019</th> <th>FYE2020</th> <th>FYE2021</th> <th>FYE2022</th> </tr> </thead> <tbody> <tr> <td>A. Planning and Engineering</td> <td>C</td> <td></td> <td>300</td> <td>170</td> <td>76</td> <td>104</td> <td></td> <td>650</td> </tr> <tr> <td>B. Land and Right of Way</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0</td> </tr> <tr> <td>C. Construction</td> <td>C</td> <td></td> <td></td> <td>1742</td> <td>3742</td> <td>217</td> <td>296</td> <td>5997</td> </tr> <tr> <td>D. Equipment</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0</td> </tr> <tr> <td>E. Other Costs</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0</td> </tr> <tr> <td>Total</td> <td>C</td> <td>0</td> <td>300</td> <td>1912</td> <td>3818</td> <td>321</td> <td>296</td> <td>6647</td> </tr> </tbody> </table>										Source of Funds*	Estimated Funding by Year						Total Estimated Cost	FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	A. Planning and Engineering	C		300	170	76	104		650	B. Land and Right of Way								0	C. Construction	C			1742	3742	217	296	5997	D. Equipment								0	E. Other Costs								0	Total	C	0	300	1912	3818	321	296	6647
	Source of Funds*	Estimated Funding by Year						Total Estimated Cost																																																																					
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022																																																																						
A. Planning and Engineering	C		300	170	76	104		650																																																																					
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C. Construction	C			1742	3742	217	296	5997																																																																					
D. Equipment								0																																																																					
E. Other Costs								0																																																																					
Total	C	0	300	1912	3818	321	296	6647																																																																					
<div style="display: flex; justify-content: space-between;"> *Funding <div> (C) Capital Reserve Fund (G) General Obligation Bonds (O) Other </div> </div>																																																																													

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
H) FITCH HIGH SCHOOL	5) EDUCATION

DESCRIPTION/PURPOSE/JUSTIFICATION

The 2008 addition to the high school replaced most of the older section of the school. The remaining older portions need improvements to remain effective. That work includes removal of non-friable asbestos floor tile, fire code and ADA accessibility code compliance, central air conditioning and ventilation (HVAC), and security improvements.

Programmed for FYE 18 are funds (\$85,000) for plans and specifications for structural issues pertaining to ADA and (\$85,000) for plans and specifications to address fire code deficiencies. The fire detection and alarm system must be replaced and fire sprinklers must be installed in the older section.

Programmed for FYE 19 are funds (\$336,000) for design and construction of required security upgrades. The current security system does not allow full coverage of the perimeter, common areas, and halls inside the school. This is a proposal to extend coverage to all of these areas.

Programmed for FYE 20 are funds (\$700,000) for fire code compliance and (\$237,000) for ADA construction.

Programmed for FYE 21 are funds (\$100,000) for development of plans and specifications for HVAC. This building is not fully air conditioned. Air conditioning provides a good working environment for student achievement.

Programmed for FYE 22 are funds (\$2,000,000) for HVAC installation.

State Department of Education Grants may reimburse approximately 50% of ADA and fire code project costs. The State requires local approval of entire project funding to apply for the grant. If CIP funding is approved, Groton Public Schools will apply and reimbursed funds will be returned to the Capital Reserve Fund.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Goal 1 (reduce overall energy use) and Goal 2 (transition to renewable energy)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C		170			100		270
B. Land and Right of Way								0
C. Construction	C			336	937		2000	3273
D. Equipment								0
E. Other Costs								0
Total	C	0	170	336	937	100	2000	3543

*Funding

(C) Capital Reserve Fund

(G) General Obligation Bonds

(O) Other

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT

I) CATHERINE KOLNASKI

ACTIVITY/DEPARTMENT

5) EDUCATION

DESCRIPTION/PURPOSE/JUSTIFICATION

Catherine Kolnaski Elementary School opened in 2008. The current security system in the school does not allow full coverage of the perimeter of the school or the common areas and halls inside the school. This is a proposal to extend security coverage to all of these areas. These improvements will bring this school up to current security standards that were not in place at the time the school was planned.

Requested for FYE 17 are funds (\$127,000) for plans and construction of security system upgrades.

While there have been state grants for security updates in the past, none are currently available.

Plans and specifications for this project were partially developed by Groton Public Schools in FYE 12.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction	C	127						127
D. Equipment								0
E. Other Costs								0
Total	C	127	0	0	0	0	0	127

*Funding

(C) Capital Reserve Fund

(G) General Obligation Bonds

(O) Other

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
J) MARY MORRISSON	5) EDUCATION

DESCRIPTION/PURPOSE/JUSTIFICATION

Studies undertaken by the Town Council and Board of Education agree that it is cost effective to keep Mary Morrisson in use. Continued use requires fire code and ADA accessibility compliance, window replacement, security upgrades, central air conditioning and ventilation (HVAC), plumbing and electrical upgrades, expansion of the parking lot, and replacement of temporary classrooms with a permanent addition.

Requested for FYE 17 are funds (\$80,000) for plans and specifications for parking/vehicle access.

Programmed for FYE 18 are funds (\$420,000) for construction of parking. Also programmed for FYE 18 are funds (\$100,000) for plans and specifications for HVAC and funds (\$302,000) for HVAC construction.

Programmed for FYE 19 are funds (\$314,000) for life safety code construction for which design work was funded in FYE 13 and (\$132,000) for plans and specifications to address ADA issues.

Programmed for FYE 20 are funds (\$374,000) for ADA construction and (\$187,000) for plans and specifications for replacement of temporary classrooms with permanent space.

Programmed for FYE 21 are funds (\$900,000) for permanent space construction and (\$100,000) for plans and specifications for a replacement electrical system.

Programmed for FYE 22 are funds (\$1,377,000) for electrical system construction.

State Department of Education Grants may reimburse approximately 50% of ADA project costs. The State requires local approval of entire project funding to apply for the grant. If CIP funding is approved, Groton Public Schools will apply and reimbursed funds will be returned to the Capital Reserve Fund.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Goal 1 (reduce overall energy use) and Goal 2 (transition to renewable energy)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C	80	100	132	187	100		599
B. Land and Right of Way								0
C. Construction	C		722	314	374	900	1377	3687
D. Equipment								0
E. Other Costs								0
Total	C	80	822	446	561	1000	1377	4286

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds (O) Other

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
K) NORTHEAST ACADEMY	5) EDUCATION

DESCRIPTION/PURPOSE/JUSTIFICATION

Northeast Academy was opened in 2008. The current security system in the school does not allow full coverage of the perimeter of the school or the common areas and halls inside the school. This is a proposal to extend security coverage to all of these areas. These improvements will bring this school up to the current security standards that were not in place at the time the school was built.

Requested for FYE 17 are funds (\$84,000) for design and construction of security system upgrades.

While there have been state grants for security updates in the past, none are currently available.

Plans and specifications for this project were partially developed by Groton Public Schools in FYE 12.

Engineering: Consultant
Construction: Contractor
Impact on operating budget: No impact
Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction	C	84						84
D. Equipment								0
E. Other Costs								0
Total	C	84	0	0	0	0	0	84

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
L) PLEASANT VALLEY	5) EDUCATION
<p style="text-align: center;">DESCRIPTION/PURPOSE/JUSTIFICATION</p> <p>Studies by the Town Council and Board of Education agree that a full renovation and expansion of this facility is not cost effective. Continued use of this school requires handicapped accessibility (ADA) upgrades, fire code compliance, the replacement of the temporary classrooms with permanent classrooms, electrical and plumbing upgrades, new heating system, central air conditioning, ventilation (HVAC), and improved security. These projects may be unnecessary if the school construction bond referendum passes.</p> <p>Programmed for FYE 18 are funds (\$200,000) for plans and specifications for HVAC; (\$85,000) for plans and specifications to address fire code issues; and (\$85,000) for plans and specifications to address ADA issues. Programmed for FYE 19 are funds (\$1,573,000) for HVAC construction and (\$100,000) for plans and specifications for a replacement electrical system.</p> <p>Programmed for FYE 20 are funds (\$495,000) for fire code construction; (\$275,000) for ADA construction; and (\$1,027,000) for electrical system construction.</p> <p>Programmed for FYE 21 are funds (\$100,000) for plans and specifications for permanent classroom space construction.</p> <p>Programmed for FYE 22 are funds (\$900,000) for permanent space construction.</p> <p>State Department of Education Grants may reimburse approximately 50% of ADA, fire code, and classroom addition project costs. The State requires local approval of entire project funding to apply for the grant. If CIP funding is approved, Groton Public Schools will apply and reimbursed funds will be returned to the Capital Reserve Fund.</p> <p>Engineering: Consultant Construction: Contractor Impact on operating budget: No impact Sustainability Goals: Goal 1 (reduce overall energy use) and Goal 2 (transition to renewable energy)</p>	

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C		370	100		100		570
B. Land and Right of Way								0
C. Construction	C			1573	1797		900	4270
D. Equipment								0
E. Other Costs								0
Total	C	0	370	1673	1797	100	900	4840

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds (O) Other

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
M) WEST SIDE MIDDLE SCHOOL	5) EDUCATION

DESCRIPTION/PURPOSE/JUSTIFICATION

Studies were undertaken by the Town Council and the Board of Education agree it is cost effective to keep West Side Middle School in use. Continued effective use of the facility will require replacement of the steam heating system, removal of non-friable asbestos floor tile, installation of central air conditioning and ventilation (HVAC), electrical and plumbing upgrades, improved security and improvements to the parking lot. The projects below may be affected by future facility plans.

Programmed for FYE 18 are funds (\$200,000) for plans and specifications for HVAC installation.

Programmed for FYE 19 are funds (\$3,080,000) for HVAC construction.

Programmed for FYE 20 are funds (\$200,000) for engineering for an upgrade to the electrical system.

Programmed for FYE 21 are funds (\$1,808,000) for electrical system construction and (\$67,000) for plans and specifications to improve the current parking lot and bus drop off area. A separate parent drop off lane needs to be developed.

Programmed for FYE 22 are funds (\$192,000) for parking lot construction.

In the future, this building will need additional space for resource and remedial programs and a larger school nurse suite.

These projects may be unnecessary if the school construction bond referendum passes.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Goal 1 (reduce overall energy use) and Goal 2 (transition to renewable energy)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C		200		200	67		467
B. Land and Right of Way								0
C. Construction	C			3080		1808	192	5080
D. Equipment								0
E. Other Costs								0
Total	C	0	200	3080	200	1875	192	5547

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

CAPITAL IMPROVEMENT PROGRAM

FYE 2017 TO FYE 2022

PROJECT SUMMARY (000)

6) PUBLIC BUILDINGS	SOURCE	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	TOTAL COST
A) SPICER HOUSE - PARKS AND RECREATION OFFICE		0	0	0	0	0	0	0
B) HUMAN SERVICES BUILDING		0	0	0	0	0	0	0
C) TOWN HALL COMPLEX	C	100	0	0	0	0	0	100
D) GROTON PUBLIC LIBRARY	O	0	20	0	0	0	0	20
E) TOWN HALL ANNEX COMPLEX - FLEET AND ROADS/STREETS FACILITY	C	0	125	TBD	0	0	0	125
F) VACANT SCHOOL PROPERTIES	C	0	0	0	0	0	0	0
G) TOWN HALL ANNEX COMPLEX - PARKS MAINTENANCE BUILDING	C	0	25	0	0	0	0	25
H) JABEZ SMITH HOUSE	C	0	25	0	25	0	0	50
I) GOLF COURSE FACILITIES - MAINTENANCE BUILDING	C	0	45	120	0	0	0	165
J) CONSTRUCTION OF PERMANENT VEHICLE WASH FACILITY	C	0	TBD	0	0	0	0	0
K) GOLF COURSE FACILITIES - CLUB HOUSE	C	0	35	270	101	55	75	536
L) LEASED BUILDINGS	C	75	100	100	0	0	0	275
TOTAL	C,O	175	375	490	126	55	75	1296
Capital Reserve Fund	C	175	355	490	126	55	75	1276
General Obligation Bonds	G	0	0	0	0	0	0	0
Other	O	0	20	0	0	0	0	20

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL								
PROJECT A) SPICER HOUSE - PARKS AND RECREATION OFFICE				ACTIVITY/DEPARTMENT 6) PUBLIC BUILDINGS				
<p style="text-align: center; margin: 0;">DESCRIPTION/PURPOSE/JUSTIFICATION</p> <p>The Spicer House and Spicer Park properties were deeded to the Town on September 6, 1963 as a free gift from Mabel M. Spicer upon her death. Ms. Spicer's will required that the property "... be used in perpetuity as a public park and recreation area". The Spicer House parcel is 2.94 acres and contains the Spicer House (Recreation Department offices) and a storage barn for boating equipment. The Spicer Park parcel is 3.55 acres and has a small playing field, storage garage and parking located on it. This project is consistent with the policies identified in the Plan of Conservation and Development (page 54) to address the protection of historic resources.</p> <p>No funds will be programmed for any capital projects concerning this facility until the Fitch Middle School Reuse Project has been addressed by the Town Council. The facility will be maintained using Public Works annual operating funds.</p> <p>Engineering: Consultant Construction: Contractor Impact on operating budget: No impact Sustainability Goals: Not applicable</p>								
RECOMMENDED FINANCING (000)								
	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction								0
D. Equipment								0
E. Other Costs								0
Total		0	0	0	0	0	0	0
<div style="display: flex; justify-content: space-between;"> *Funding <div style="display: flex; gap: 20px;"> (C) Capital Reserve Fund (G) General Obligation Bonds </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="display: flex; gap: 20px;"> (O) Other </div> </div>								

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL								
PROJECT			ACTIVITY/DEPARTMENT					
B) HUMAN SERVICES BUILDING			6) PUBLIC BUILDINGS					
DESCRIPTION/PURPOSE/JUSTIFICATION								
<p>This project is consistent with the policies identified in the Plan of Conservation and Development (page 134) to address community facility needs and the Historic Preservation Plan (1996). This building was constructed in 1913 as an elementary school (Poquonnock School). Decommissioned in 1956, it was converted in 1960 to the first Town Library. This building served as the Town Library until the new library was completed in 1977 on Route 117. At that time, the building was converted into office space for Human Services, which moved there from the basement of Town Hall.</p> <p>No funds will be programmed for any capital projects concerning this facility until the Fitch Middle School Reuse Project has been addressed by the Town Council. The facility will be maintained using Public Works annual operating funds.</p>								
<p>Engineering: Consultant Construction: Contractor Impact on operating budget: No impact Sustainability Goals: Goal 1 (reduce overall energy use)</p>								
RECOMMENDED FINANCING (000)								
	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction								0
D. Equipment								0
E. Other Costs								0
Total		0	0	0	0	0	0	0
*Funding (C) Capital Reserve Fund (G) General Obligation Bonds (O) Other								

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT
C) TOWN HALL COMPLEX	6) PUBLIC BUILDINGS

DESCRIPTION/PURPOSE/JUSTIFICATION

To address the concerns of the Town's insurance carrier, an evaluation of Town Hall, in particular, Land Records and Information Technology, is needed to ensure the security of expensive equipment and important non-replaceable records. There are many other issues in Town Hall that need to be addressed, such as HVAC, electrical and energy efficiency. All of these concerns should be included in a comprehensive plan for the entire complex.

The analysis of space use must include both buildings that currently occupy the site (the former Fitch Middle School and the Town Hall). This site is now a municipal complex, where additional departments of the general government and the Board of Education could co-locate in spaces that function efficiently.

Approved in FYE 15 was \$55,000 to hire professional consulting services to: 1) perform ADA and building code analysis; 2) conduct a physical condition assessment; 3) identify space needs for those departments that may move into the facility; and 4) provide a rough order of magnitude cost for the renovations to maximize use of the facilities. Two options for reuse of Fitch Middle School, which would consolidate Town and Board of Education services, were presented to the Town Council in August, 2015. The cost for both options was considered too high and a more limited reuse plan will be developed.

Approved in FYE 16 were funds (\$475,000) to address the roof issues found by the assessment. The A-wing roof must be replaced. The B, C, and D-wing roofs will be repaired.

Requested for FYE 17 are funds (\$100,000) to make required code modifications and minor repairs to the interiors in preparation for moving recreation programs from William Seely to Fitch Middle.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: Unknown until study has been completed

Sustainability Goals: Goal 1 (reduce overall energy use) and Goal 4 (adapt to climate change)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction	C	100						100
D. Equipment								0
E. Other Costs								0
Total	C	100	0	0	0	0	0	100

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
D) GROTON PUBLIC LIBRARY	6) PUBLIC BUILDINGS

DESCRIPTION/PURPOSE/JUSTIFICATION

This project involves the installation of two Pan/Tilt/Zoom (PTZ) cameras and two LED video lights in meeting rooms 1 and 2. This will allow one library staff person to pan, tilt, zoom, focus and switch between two cameras from the remote library control room and immediately encode it into the video production tricast and/or broadcast the signal "live" on GMTV (similar to Town Hall Annex's community room 1 and the Groton Senior Center).

Programmed for FYE 18 are funds (\$20,000) to purchase and install two remote controlled PTZ cameras, two LED video lights for the library's main meeting rooms (1 and 2) along with AC power installation (at the camera locations and lights) and running video, audio and control cables to the library's GMTV room. Town staff will perform the installation for the project.

Engineering: Not applicable

Construction: In-house

Impact on operating budget: No impact

Sustainability Goals: Goal 1 (reduce overall energy use)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction								0
D. Equipment	O		20					20
E. Other Costs								0
Total	O	0	20	0	0	0	0	20

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other (LoCIP)

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL								
PROJECT				ACTIVITY/DEPARTMENT				
E) TOWN HALL ANNEX COMPLEX - FLEET AND ROADS/STREETS FACILITY				6) PUBLIC BUILDINGS				
DESCRIPTION/PURPOSE/JUSTIFICATION								
A comprehensive study completed in 2000 identified the need to replace the Vehicle Maintenance Facility, which is consistent with the policy identified in the 2002 Plan of Conservation and Development (page 132) to address community facility needs.								
The study found this 60 year old facility deficient as follows:								
A) Insufficient Space: Vehicle size, complexity, and quantity maintained makes the 3,380 square foot facility outdated, inefficient, undersized, and unsafe to perform maintenance. Established and proven planning guidelines suggest 27,000 square feet is required to maintain our fleet.								
B) Restrictive and Inefficient Facilities: Maintenance of trucks with booms or cranes and/or fire department ladder trucks is difficult. Low entry doors and insufficient interior vertical clearance cause lost technician time forcing outdoor work in varying weather conditions. Timely repair of emergency vehicles is critical.								
C) Insufficient Repair Bays: The heavy repair area is too small for today's trucks. Repairs spill over into areas designed for component repair, support equipment, or portable equipment storage. Jockeying of trucks in these tight quarters results in lost technician time.								
D) Maintenance Equipment: The facility has no vehicle lifts for trucks, resulting in trucks being at unsuitable working height for the mechanic who must rely on floor jacks. This makes brake work or tire changes, for example, very inefficient.								
E) Indoor Air Quality: Welding now done in the main shop causes poor air quality. To protect the air quality, the overhead doors must be opened to clear the air and results in all the heat being lost in the winter.								
F) Energy Use: The facility is poorly insulated. Doors and windows contribute to significant heat loss.								
Programmed for FYE 18 are funds (\$125,000) to complete the design and determine the cost of this project.								
Programmed for FYE 19 are funds (TBD) to construct the project.								
Engineering: Consultant								
Construction: Contractor								
Impact on operating budget: Unknown at this time								
Sustainability Goals: Goal 1 (reduce overall energy use) and Goal 2 (transition to renewable energy)								
RECOMMENDED FINANCING (000)								
	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C		125					125
B. Land and Right of Way								0
C. Construction				TBD				0
D. Equipment								0
E. Other Costs								0
Total	C	0	125	TBD	0	0	0	125
*Funding (C) Capital Reserve Fund (G) General Obligation Bonds (O) Other								

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT
F) VACANT SCHOOL PROPERTIES	6) PUBLIC BUILDINGS

DESCRIPTION/PURPOSE/JUSTIFICATION

Of the schools that were declared surplus in 2008, the Eastern Point site has been leased to Project LEARN and is home to a new marine science magnet high school, the Colonel Ledyard site has been leased to the City of Groton, and the Noank School is scheduled to be demolished, with the property retained by the Town and a portion used as a community garden. Remaining are the Groton Heights and William Seely sites. A portion of the William Seely School is currently being used by the Parks and Recreation Department for programming needs. Groton Heights cannot be used due to the potential exposure of hazardous building materials and mold related to the steep decline in the condition of the building's interior.

Approved in FYE 16 were funds (\$160,000) to remove the underground oil tank by September 2017 and install an above ground tank.

The Town has recently hired the consulting firm of Tighe & Bond through a DECD Brownfields Assessment Grant to investigate Groton Heights for hazardous substances and pollutants. The results of this assessment may be used to apply for clean-up funds or may be provided to a future developer if the property is sold.

Engineering: Consultant
Construction: Contractor
Impact on operating budget: No impact
Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction								0
D. Equipment								0
E. Other Costs								0
Total	C	0	0	0	0	0	0	0

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL								
PROJECT				ACTIVITY/DEPARTMENT				
G) TOWN HALL ANNEX COMPLEX - PARKS MAINTENANCE BUILDING				6) PUBLIC BUILDINGS				
DESCRIPTION/PURPOSE/JUSTIFICATION								
<p>Programmed for FYE 18 are funds (\$25,000) for design of an addition and renovations to the Parks Maintenance Building to provide an enclosed heated storage area and adequate cover for the vehicles and equipment. The provision of covered storage will protect vehicles from harsh weather conditions, will prevent material from freezing in truck beds and will eliminate the need to off-load equipment every night.</p>								
<p>Engineering: Consultant Construction: Contractor Impact on operating budget: Estimated increase in utility costs of \$350/year Sustainability Goals: Goal 1 (reduce overall energy use)</p>								
RECOMMENDED FINANCING (000)								
	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C		25					25
B. Land and Right of Way								0
C. Construction								0
D. Equipment								0
E. Other Costs								0
Total	C	0	25	0	0	0	0	25
<p>*Funding (C) Capital Reserve Fund (G) General Obligation Bonds (O) Other</p>								

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT
H) JABEZ SMITH HOUSE	6) PUBLIC BUILDINGS

DESCRIPTION/PURPOSE/JUSTIFICATION

This project is in keeping with the policies identified in the Plan of Conservation and Development to address the protection of historic resources.

The c. 1783 Jabez Smith House has undergone extensive stabilization and restoration work since the Town accepted stewardship of the homestead in 1974.

Approved in FYE 15 were funds (\$10,000) to update the Condition Report and Manual of Maintenance and Repair for the Jabez Smith House that was prepared by Noyes-Vogt Architects in 2006. The Noyes-Vogt report provided the framework for the prioritized list of maintenance and repair projects that have been systematically addressed at the house. O'Riordan Migani Architects, LLC has been hired to conduct a Facility Maintenance and Utilization Study that will identify maintenance, repair, restoration and functional improvement issues for the house.

Programmed in FYE 18 and FYE 20 are funds (\$25,000/year) to address findings of the updated report. These numbers will be adjusted based on cost estimates for identified projects.

Staff continues to explore historical architectural grant opportunities to offset the cost of projects for the house.

Engineering: Consultant
Construction: Contractor/In-house
Impact on operating budget: No impact
Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction	C		25		25			50
D. Equipment								0
E. Other Costs								0
Total	C	0	25	0	25	0	0	50

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT
I) GOLF COURSE FACILITIES - MAINTENANCE BUILDING	6) PUBLIC BUILDINGS

DESCRIPTION/PURPOSE/JUSTIFICATION

The Maintenance Building exterior surfaces (roof, walls, three exterior windows, three overhead and two passage doors) need to be replaced or repaired. The existing metal panels are rusted and have numerous holes.

Programmed for FYE 18 are funds (\$45,000) for a structural engineer to prepare a bid package for the repairs. Based on a visual inspection, the repairs are estimated to be \$120,000.

Programmed for FYE 19 are funds (\$120,000) to complete the repairs.

Funding will be requested in the future to address the interior work which may include the installation of a larger heating unit to heat the entire building, the addition of a female restroom, ventilation, and other improvements to the work area.

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C		45					45
B. Land and Right of Way								0
C. Construction	C			120				120
D. Equipment								0
E. Other Costs								0
Total	C	0	45	120	0	0	0	165

*Funding

(C) Capital Reserve Fund

(G) General Obligation Bonds

(O) Other

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL																																																																						
PROJECT J) CONSTRUCTION OF PERMANENT VEHICLE WASH FACILITY				ACTIVITY/DEPARTMENT 6) PUBLIC BUILDINGS																																																																		
<p style="text-align: center;">DESCRIPTION/PURPOSE/JUSTIFICATION</p> <p>The State requires the Town to have a General Permit for the Discharge of Vehicle Maintenance Wastewater. For any violations or acts of noncompliance, the Commissioner of the State of Connecticut Department of Energy and Environmental Protection may take any enforcement action provided by law.</p> <p>After the 2002 referendum failed, which would have funded the construction of a new vehicle maintenance and wash facility, a short term solution was found to allow the washing of vehicles in compliance with State requirements regarding the discharge of vehicle wash water. Four bays in the vehicle storage garage were converted to a wash area by installing a concrete block wall and a floor drain. However, the constant exposure of the interior surfaces to water has led to failures, including moisture related failure of the concrete block and rusting steel roofing components.</p> <p>Modular, touch-less, automatic washing systems are available for trucks and large Public Works special vehicles, which will reduce the risk of injury and reduce wash time from one hour to five minutes.</p> <p>The new facility could also wash smaller pickup trucks, sedans, and other Town vehicles. It would be available for use by the City and Groton Long Point, as well as surrounding towns. Water use will be dramatically reduced. Other green technology options, such as photovoltaic solar panels, heated hot water roof panels, and geothermal heated flooring, will be investigated as part of the building design.</p> <p>Approved in FYE 15 was \$25,000 to prepare the preliminary design for the vehicle wash bay that will be part of the vehicle maintenance facility in the future.</p> <p>Programmed for FYE 18 are funds (TBD) for construction and equipment costs.</p> <p>Engineering: Consultant Construction: Contractor Impact on operating budget: Water cost savings of \$1500/year and personnel cost savings of \$7800/year Sustainability Goals: Goal 1 (reduce overall energy use) and Goal 2 (transition to renewable energy)</p>																																																																						
RECOMMENDED FINANCING (000)																																																																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="width: 25%;">Source of Funds*</th> <th colspan="6" style="text-align: center;">Estimated Funding by Year</th> <th rowspan="2" style="text-align: center;">Total Estimated Cost</th> </tr> <tr> <th style="text-align: center;">FYE2017</th> <th style="text-align: center;">FYE2018</th> <th style="text-align: center;">FYE2019</th> <th style="text-align: center;">FYE2020</th> <th style="text-align: center;">FYE2021</th> <th style="text-align: center;">FYE2022</th> </tr> </thead> <tbody> <tr> <td>A. Planning and Engineering</td> <td></td><td></td><td></td><td></td><td></td><td></td><td style="text-align: center;">0</td> </tr> <tr> <td>B. Land and Right of Way</td> <td></td><td></td><td></td><td></td><td></td><td></td><td style="text-align: center;">0</td> </tr> <tr> <td>C. Construction</td> <td style="text-align: center;">C</td><td></td><td style="text-align: center;">TBD</td><td></td><td></td><td></td><td style="text-align: center;">0</td> </tr> <tr> <td>D. Equipment</td> <td style="text-align: center;">C</td><td></td><td style="text-align: center;">TBD</td><td></td><td></td><td></td><td style="text-align: center;">0</td> </tr> <tr> <td>E. Other Costs</td> <td></td><td></td><td></td><td></td><td></td><td></td><td style="text-align: center;">0</td> </tr> <tr> <td>Total</td> <td style="text-align: center;">C</td><td style="text-align: center;">0</td><td style="text-align: center;">TBD</td><td style="text-align: center;">0</td><td style="text-align: center;">0</td><td style="text-align: center;">0</td><td style="text-align: center;">0</td> </tr> </tbody> </table>									Source of Funds*	Estimated Funding by Year						Total Estimated Cost	FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	A. Planning and Engineering							0	B. Land and Right of Way							0	C. Construction	C		TBD				0	D. Equipment	C		TBD				0	E. Other Costs							0	Total	C	0	TBD	0	0	0	0
Source of Funds*	Estimated Funding by Year						Total Estimated Cost																																																															
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D. Equipment	C		TBD				0																																																															
E. Other Costs							0																																																															
Total	C	0	TBD	0	0	0	0																																																															
<p>*Funding (C) Capital Reserve Fund (G) General Obligation Bonds (O) Other</p>																																																																						

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT
K) GOLF COURSE FACILITIES - CLUB HOUSE	6) PUBLIC BUILDINGS

DESCRIPTION/PURPOSE/JUSTIFICATION

The club house is over 100 years old. Although the windows and doors were addressed in FYE 10 (\$220,000), the oil tank replaced in FYE 11 (\$70,000), and a new roof and foundation repairs made in FYE 12 (\$200,000), the building envelope requires significant work and mechanical systems require replacement. Alterations are also required to address handicapped (ADA) accessibility to a toilet facility.

The existing male and female toilet facilities do not provide ADA accessible toilets. These facilities are only available when the restaurant is open. A plan is proposed to renovate the existing toilet rooms to provide the required accessibility and address the issues with the front ramp.

Programmed for FYE 18 are funds (\$35,000) to create a plan for correcting building accessibility issues.

Programmed for FYE 19 are funds (\$270,000) to make the required accessibility modifications and plan the HVAC work.

Programmed for FYE 20 are funds (\$101,000) to make improvements to the HVAC, replace the existing rubber spike resistance tiles in the porch areas, and prepare plans for reconstruction of several parking lots.

Programmed for FYE 21 are funds (\$55,000) for the materials to reconstruct several parking lots.

Programmed for FYE 22 are funds (\$75,000) to address the south porch area and the cart building.

Engineering: Consultant

Construction: Contractor/In-house

Impact on operating budget: No impact

Sustainability Goals: Goal 1 (reduce overall energy use)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C		35	25	10			70
B. Land and Right of Way								0
C. Construction	C			245	91	55	75	466
D. Equipment								0
E. Other Costs								0
Total	C	0	35	270	101	55	75	536

*Funding

(C) Capital Reserve Fund

(G) General Obligation Bonds

(O) Other

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT																																																														
L) LEASED BUILDINGS	6) PUBLIC BUILDINGS																																																														
DESCRIPTION/PURPOSE/JUSTIFICATION																																																															
<p>The Town leases several of its facilities to outside agencies. Although the lessee is responsible for repairs, maintenance, and alterations, the Town is responsible for repairs to the building envelope and structure.</p> <p>Noank Aquaculture Cooperative Corporation leases a 10,000 square foot building, docks, and land at 98 Main Street to conduct aquaculture operations. As part of the lease of the entire facility, they must provide office space and dockage for the Town's Shellfish Commission and the storage of small boats by the State Department of Agriculture. No work has been performed to the building envelope since 2006 when the Town took possession of the building from the State.</p> <p>Groton Ambulance, located at 217 North Road, has leased the building and land since August 28, 1980. Public Works has been making required repairs, but the building is now of the age that the windows, roof, and exterior wooden walls must be replaced. The driveway aprons, parking lot, and the driveway shared with Grasso Gardens must be repaved.</p> <p>Thames Valley Council for Community Action (TVCCA) leases the three wooden structures located at 36, 38 and 40 Central Avenue. Public Works has been making required repairs, but again the buildings are of the age that the windows, roof and exterior wooden walls must be replaced.</p> <p>Requested for FYE 17 are funds (\$35,000) to replace the roof, including repairs to sheathing, gutters, soffits and fascia, at Groton Ambulance and funds (\$40,000) to resurface the parking lots, driveway, and the access shared with Grasso Gardens.</p> <p>Programmed for FYE 18 are funds (\$100,000) to replace the roof at the Noank Hatchery.</p> <p>Programmed for FYE 19 are funds (\$100,000) to replace windows, roofs and exterior walls at the TVCCA buildings.</p> <p>Engineering: Consultant/In-house</p> <p>Construction: Contractor</p> <p>Impact on operating budget: No impact</p> <p>Sustainability Goals: Goal 1 (reduce overall energy use)</p>																																																															
RECOMMENDED FINANCING (000)																																																															
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Source of Funds*	Estimated Funding by Year						Total Estimated Cost																																																								
	FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022																																																									
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CAPITAL IMPROVEMENT PROGRAM

FYE 2017 TO FYE 2022

PROJECT SUMMARY (000)

7) TECHNOLOGY	SOURCE	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	TOTAL COST
A) NETWORK INFRASTRUCTURE UPGRADE	C,O	100	0	270	55	0	0	200
B) COMPUTER TECHNOLOGY ACQUISITION - SOFTWARE SYSTEMS	C	1189	781	781	961	0	0	3712
C) UPGRADE RADIO SYSTEMS-TOWN POLICE	C	0	300	TBD	0	0	0	300
D) PHONE SYSTEM	C	0	0	0	25	0	0	25
E) DISPATCH WORK STATION REPLACEMENT	C	35	0	0	0	0	0	35

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT
A) NETWORK INFRASTRUCTURE UPGRADE	7) TECHNOLOGY

DESCRIPTION/PURPOSE/JUSTIFICATION

This project is an ongoing effort to improve the efficiency of the Town's network infrastructure to complete the Town's work efficiently. Powerful software applications and interfaces are necessary and they require a broader and faster network infrastructure.

Requested for FYE 17 are funds (\$100,000) to purchase and install two Storage Area Network (SAN) devices providing the storage capacity required to support the current Town servers. This SAN system will replace the current SAN (HP Lefthand P4500) device that has reached its end-of-life. Third party hardware maintenance support is currently being used and it is unclear how much longer this equipment will be supported. The data on this system will be replicated in the Public Safety Building for disaster recovery.

Programmed for FYE 19 are funds (\$270,000) to set up and install a Virtual Desktop Infrastructure (VDI) project providing a comprehensive desktop environment management system. This project could extend the life span of the current desktop computers by 3 - 4 years. This will provide users with the capability to log into any Town computer and have their desktop information available, while heightening data security throughout the organization.

Programmed for FYE 20 are funds (\$55,000) for the scheduled replacement of all Town network switches.

Engineering: Not applicable
Construction: Not applicable
Impact on operating budget: No impact
Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	C			20	10			8
	O	8						8
B. Land and Right of Way								0
C. Construction								0
D. Equipment	C			250	45			92
	O	92						92
E. Other Costs								0
Total	C,O	100	0	270	55	0	0	200

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other (LoCIP)

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
B) COMPUTER TECHNOLOGY ACQUISITION - SOFTWARE SYSTEMS	7) TECHNOLOGY

DESCRIPTION/PURPOSE/JUSTIFICATION

Many software systems have reached, or will soon reach, the end of their useful lives. In FYE 14, funds (\$75,000) were appropriated to hire a consultant to undertake a comprehensive review and analysis of the Town's and Board of Education's internal operating processes, procedures, and software needs. The Enterprise Application Software Assessment is complete and in FYE 16, funds (\$380,400) were appropriated to implement the first phase of the Enterprise Application Master Plan for software replacement. This included funding for process review, development of Requests for Proposal for software provider evaluation and selection, price negotiations, contract award and implementation readiness.

Requested for FYE 17 are funds (\$1,189,000) to implement phase two of the Enterprise Application Master Plan for both the Town and the Board of Education. Due to the nature of this project, all costs are being classified as "Other Costs". This project includes:

- a. ERP Implementation and Project Management which includes Finance/Accounting, Human Resources, Fixed Assets, Budget, Purchasing and Payroll;
- b. Various application training and support for departmental information technology systems
- c. Sustainability Planning which includes long-term planning and requirements for all major Town and Board information technology systems;
- d. Improving video/web conferencing capabilities to enhance external communications and internal training.

Projected for FYE 18 through FYE 20 are costs associated with ongoing user training and support; continued implementation of the Enterprise Resource Planning (ERP) project; a GIS assessment and strategic plan; and implementation of a Electronic Document Management System (EDMS). Because this is a multi-year effort, additional costs in outlying years (FYE 18 through FYE 20 and beyond) will be identified for additional specific projects as they are prioritized.

Engineering: Not applicable

Construction: Not applicable

Impact on operating budget: TBD

Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction								0
D. Equipment								0
E. Other Costs	C	1189	781	781	961			3712
Total	C	1189	781	781	961	0	0	3712

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL								
PROJECT			ACTIVITY/DEPARTMENT					
C) UPGRADE RADIO SYSTEMS-TOWN POLICE			7) TECHNOLOGY					
DESCRIPTION/PURPOSE/JUSTIFICATION								
<p>This project was approved and funded in the amount of \$100,000 for FYE 16 to study (Police Study) the current state of the Police Department's (PD) radio system as well as the ability to extend the system into Groton City for the purpose of combining the dispatch of the City, Groton Long Point and Town Police Departments into the Town's Dispatch Center. This will reduce the transfer of citizen calls for assistance and shorten the current communications path between agencies and their responders. The Town PD radio system has never sufficiently covered the department's jurisdiction and in particular has coverage issues in the North Central and Northeast sections of Groton</p> <p>The 30+ year old radio system is well beyond the expected service life, and repair parts are unavailable. The entire system has been poorly maintained and has never been updated. The portable units issued to officers are 15-20+ years old and repairs require used parts scavenged from other broken units. If suitable scavenged parts are unavailable the unit is permanently taken out of service.</p> <p>The approved funds for FYE 16 will be used to immediately purchase a number of portable radios.</p> <p>Programmed for FYE 18 are funds (\$300,000) to purchase additional radios, transmitters, receivers, modules and related equipment needed to bring the system up to date and correct past deficiencies.</p> <p>Programmed for FYE 19 are funds (TBD) to implement the recommendations of the Police Study.</p> <p>Availability of grant funds to offset town expenditures will be investigated during the project.</p>								
<p>Engineering: Contractor/Staff</p> <p>Construction: Contractor</p> <p>Impact on operating budget: Undetermined</p> <p>Sustainability Goals: Not applicable</p>								
RECOMMENDED FINANCING (000)								
	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction								0
D. Equipment	C		300	TBD				300
E. Other Costs								0
Total	C	0	300	TBD	0	0	0	300
<p>*Funding (C) Capital Reserve Fund (G) General Obligation Bonds (O) Other</p>								

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT
D) PHONE SYSTEM	7) TECHNOLOGY

DESCRIPTION/PURPOSE/JUSTIFICATION

In FYE 14, the Town entered into a five year lease purchase agreement for a VOIP (Voice Over Internet Protocol) phone and voicemail system, which provided significant technological improvements over the previous 15 year old telephone system with no increase in operational costs. Approved in FYE 14 were funds (\$45,000) to purchase and install POE (Power over Ethernet) switches which provide the connection between the phone system and the Town's network. This work was completed.

Programmed for FYE 20 are funds (\$25,000) for additional equipment upgrades that may be needed at the end of the lease.

Engineering: Not applicable
Construction: Not applicable
Impact on operating budget: No impact
Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction								0
D. Equipment	C				25			25
E. Other Costs								0
Total	C	0	0	0	25	0	0	25

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT
E) DISPATCH WORK STATION
REPLACEMENT

ACTIVITY/DEPARTMENT
7) TECHNOLOGY

DESCRIPTION/PURPOSE/JUSTIFICATION

The Emergency Telecommunicators' ergonomically designed workstations were installed in 2000. After 15 years of constant use, only one of the eight workstations is still operable. Repair parts are no longer available as the supplier went out of business years ago and the workstations must be replaced in order to conform to requirements for accessibility and employee safety.

Requested for FYE 17 are funds (\$35,000) to purchase and install seven ergonomically designed workstations with a 15 year service life.

While there are no grant funds available to support the purchase and installation of the workstations, the town is eligible for reimbursement from the State of Connecticut for capital equipment acquisition for 50% of the acquisition cost (50/50 match).

If this project is approved, application will be made for the reimbursement prior to the start of fiscal year 2017 to reduce the time between expenditure and reimbursement from the State.

Engineering: Not applicable

Construction: Vendor

Impact on operating budget: No impact

Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction								0
D. Equipment	C	35						35
E. Other Costs								0
Total	C	35	0	0	0	0	0	35

*Funding

(C) Capital Reserve Fund

(G) General Obligation Bonds

(O) Other

CAPITAL IMPROVEMENT PROGRAM

FYE 2017 TO FYE 2022

PROJECT SUMMARY (000)

8) PLANNING AND ECONOMIC DEVELOPMENT	SOURCE	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	TOTAL COST
A) ECONOMIC ASSISTANCE FUND	C	50	100	100	100	100	100	550
B) OPEN SPACE ACQUISITION	C	50	100	25	25	25	25	250
C) MARKETING EXCESS TOWN PROPERTY	C	0	15	15	15	15	0	60

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT
A) ECONOMIC ASSISTANCE FUND	8) PLANNING AND ECONOMIC DEVELOPMENT

DESCRIPTION/PURPOSE/JUSTIFICATION

This program provides funding for the construction of necessary public infrastructure improvements associated with new job-creating development opportunities. The goal is to retain, support, and entice new job-creating businesses to Groton by paying for public infrastructure improvements that are extraordinary in nature, and usually beyond the business' ability to pay. Public improvements that would support these businesses can include water and sewer line extensions, electric and telephone extensions, public sidewalks, road improvements, installation of traffic control devices, street lighting, and downstream drainage improvements. Contributions to the fund are requested annually with appropriations made as-needed. Program guidelines were established by the Town Council, which authorizes all expenditures.

To date, four projects have been funded using this program: 1) property acquisition associated with the Midway Industrial area; 2) Shore Avenue relocation associated with the Pfizer/Groton land exchange project; 3) Mystic public restrooms; and 4) partial cost of a new sidewalk on Route 1, east of Buddington Road. As of June 30, 2015 the fund balance is \$512,399.95.

Requested for FYE 17 are funds (\$50,000) to complete projects supporting economic development and/or set aside funds until such projects arise. Expenditures are contingent upon the need for economic assistance to assist a business looking to grow or to relocate to Town. There are presently no projects planned, however the additional funds provide a tool critical to the support of the Town's economic development efforts.

Programmed for FYE 18 through FYE 22 are funds (\$100,000/year) to continue the program and develop a reserve fund to enable the Town to provide assistance for a larger project, or to assist multiple projects in a short time period should they arise.

Engineering: Not applicable

Construction: Not applicable

Impact on operating budget: Not identified at this time; depends on types of projects authorized

Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction	C	50	100	100	100	100	100	550
D. Equipment								0
E. Other Costs								0
Total	C	50	100	100	100	100	100	550

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT
B) OPEN SPACE ACQUISITION	8) PLANNING AND ECONOMIC DEVELOPMENT

DESCRIPTION/PURPOSE/JUSTIFICATION

The Conservation Commission and the Planning Commission through the Plan of Conservation and Development have identified a number of parcels of land that would be worthy of acquisition as Town open space. This would allow the Town to protect natural resources, make trail connections, allow for marsh advancement due to climate change, and fill gaps in and around existing open space. Funds from this project were most recently used to leverage the purchase of the Sparkle Lake Conservation Area on Thomas Road by applying them to the required 25% match for a State Open Space and Watershed Land Acquisition (OSWLA) grant. The Office of Planning and Development Services anticipates submitting another OSWLA grant application in FYE 17 for funds to purchase open space. Groton is eligible to receive up to 75% of the fair market value of a property until 2018, when we are no longer eligible for distressed community benefits and the maximum grant award decreases to 65% of fair market value. Connecting our open space resources creates more recreation opportunities, contributes to a higher quality of life and will benefit the economy.

Requested for FYE 17 are funds (\$50,000) for required appraisals, surveys and environmental assessments to support the OSWLA grant application.

Programmed for FYE 18 are funds (\$100,000) to match an anticipated OSWLA grant.

Programmed for FYE 19 through FYE 22 are funds (\$25,000/year) to investigate potential open space acquisition through required surveys and environmental assessments, to fund negotiations for property acquisition, and to provide matching funds for open space grants. The Open Space Acquisition Fund balance as of June 30, 2015 is (\$95,137.10). Fees collected in lieu of open space dedication through the Planning Commission's subdivision process are also used toward the purchase of open space.

Engineering: Not applicable

Construction: Not applicable

Impact on operating budget: Not applicable

Sustainability Goals: Goal 5 (reduction of impervious surfaces) and Goal 4 (adapt to climate change)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way	C	50	100	25	25	25	25	250
C. Construction								0
D. Equipment								0
E. Other Costs								0
Total	C	50	100	25	25	25	25	250

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

**CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL**

PROJECT	ACTIVITY/DEPARTMENT
C) MARKETING EXCESS TOWN PROPERTY	8) PLANNING AND ECONOMIC DEVELOPMENT

DESCRIPTION/PURPOSE/JUSTIFICATION

As a result of school closings since the mid-1990s, Groton has had the opportunity to dispose of a number of excess buildings and properties. This has been done with very little marketing effort. If the Fitch Middle School renovation project and the school initiative bond referendum passes, there may be three elementary schools (Pleasant Valley, Claude Chester, S.B. Butler) and three town service buildings (Human Services, Spicer House, School Administration), along with the former Groton Heights School, that may be vacant.

The 2006 Groton Strategic Economic Development Plan states that the Town needs to take a proactive approach to creating sites for economic development. Each of these properties has its own unique character that can contribute to the future economic growth of Groton. The purpose of this project is to determine reuse options, actively market and promote the properties and then work towards lease or sale agreements as allowed by Town Charter and any relevant deed restrictions.

Programmed for FYE 18 are funds (\$15,000) to develop and distribute marketing materials, prepare appraisals and condition survey for the former Groton Heights School.

Programmed for FYE 19 through FYE 21 are funds (\$15,000/year) to develop and distribute materials to market excess Town properties as they become available, including the preparation of appraisals and condition surveys.

Engineering: Not applicable
Construction: Not applicable
Impact on operating budget: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction								0
D. Equipment								0
E. Other Costs	C		15	15	15	15		60
Total	C	0	15	15	15	15	0	60

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other

CAPITAL IMPROVEMENT PROGRAM

FYE 2017 TO FYE 2022

PROJECT SUMMARY (000)

9) ENERGY EFFICIENCY AND CONSERVATION	SOURCE	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	TOTAL COST
A) LED STREETLIGHTS	O	465	0	0	0	0	0	465
B) SOLAR ARRAY	O	0	4000	0	0	0	0	4000

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT
A) LED STREETLIGHTS	9) ENERGY EFFICIENCY AND CONSERVATION

DESCRIPTION/PURPOSE/JUSTIFICATION

The Town owns the streetlights in the Eversource service area. In 1990 the lights were converted from incandescent and mercury vapor to high pressure sodium vapor, which at the time was the most efficient street lighting source.

The LED (light emitting diode) is now the most efficient street lighting source. The life expectancy is three times that of the high pressure sodium and they use 50-75% less energy for the same amount of light.

This project involves the conversion/replacement of approximately 1,400 Town-owned cobra head street lights, 42 decorative lights in Mystic and a number of lights in the parking lots of Town-owned buildings with energy efficient LED street lights.

The Connecticut Conference of Municipalities (CCM) simplified the acquisition of this technology for the member communities by their LED Streetlight Retrofit Initiative. A CCM-issued Request for Qualifications was evaluated and three companies, based on their responses, were ultimately selected and recommended to the member communities. The Town issued a Request for Proposals (RFP) to the three companies to determine which company could best meet the Town's needs. The proposals have been received and reviewed, and discussions with the company selected for an interview have been started. Town staff is working with the company to develop a project scope, and cost and method to finance the project, and then present it to the Town Council. The project is estimated at \$464,000.

Funds were approved in FYE 16 (\$28,000) to replace deficient arms.

Requested for FYE 17 are funds (\$465,000) to complete the conversion from high-pressure sodium to LED streetlights. The Town will be eligible for estimated rebates of \$148,000 from the utility company.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Goal 1 (reduce overall energy use) and Goal 2 (transition to renewable energy)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction	O	465						465
D. Equipment								0
E. Other Costs								0
Total	O	465	0	0	0	0	0	465

*Funding

(C) Capital Reserve Fund

(G) General Obligation Bonds

(O) Other (Rebates/
Third Party Financing)

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT
B) SOLAR ARRAY	9) ENERGY EFFICIENCY AND CONSERVATION

DESCRIPTION/PURPOSE/JUSTIFICATION

Renewable energy at closed landfills provides a unique and productive use of land that normally has limited recreation, conservation or development potential. The EPA promotes the reuse of landfills for renewable energy generation. A feasibility assessment of the Flanders Road Landfill has determined that a 4 to 5 megawatt ground based solar array could be constructed on the closed portion of the landfill. This analysis was performed by a private designer and installer of large commercial and government grid connector solar power systems.

There are several reasons why this site would be an ideal location for solar power generation. First, this site is a brownfield that would not be used for many other purposes and could easily save the Town's pristine greenfield space for new development related to higher taxable purposes. Second, the site is out of the public view and faces south and west. Third, the site faces no obvious permitting hurdles and could start generating electricity within one year of a contract signing. Fourth, the site is relatively level and clear, making construction costs low. Fifth, the site already has an existing 3 phase power system so no infrastructure upgrades would be required.

Project delivery may take the form of municipal ownership (Town finances, designs, constructs, owns, operates and maintains) or land lease (Town leases the land where a third party finances, designs, constructs, operates and maintains and the third party sells the power) or land lease with power purchase agreement (Town purchases the power for the term of the agreement, and the third party finances, designs, constructs, operates and maintains). What makes this project attractive is the Federal Tax Credits it generates. However, the companies that the Town would partner with have slowed their development efforts, thus this project was moved out one year.

Programmed for FYE 18 are funds (\$4,000,000) to establish the solar array.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: This project would generate funding which reduces operational costs

Sustainability Goals: Goal #1 (transition to renewable energy) and Goal #3 (reduce greenhouse gas)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering								0
B. Land and Right of Way								0
C. Construction	O		4000					4000
D. Equipment								0
E. Other Costs								0
Total	O	0	4000	0	0	0	0	4000

*Funding (C) Capital Reserve Fund (G) General Obligation Bonds
(O) Other (Third Party)

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT
A) SEWER LINE INFRASTRUCTURE REPAIR	10) WATER POLLUTION CONTROL FACILITY

DESCRIPTION/PURPOSE/JUSTIFICATION

These projects have been approved by the Water Pollution Control Authority as part of their annual budget and are paid from the user fees collected. This project is in keeping with the policies identified in the Plan of Conservation and Development (page 141) to enhance the infrastructure. The collection system is experiencing deterioration in some of the larger diameter concrete collection piping and in concrete manholes. This project will address the need to repair/replace portions of the existing collection and discharge system as they are identified.

Requested for FYE 17 are funds (\$51,000) to conduct an Inflow & Infiltration (I & I) study of the Indian Field, Corey Road, and Ring Drive neighborhoods adjacent to Fort Hill Brook and Poquonnock Plains Park. The sewer lines will be thoroughly cleaned and visibly inspected with remote camera, and a report prepared identifying major I & I sources and recommended repair methods.

Programmed for FYE 18 are funds (\$572,000) to line the main sewer lateral between the Poquonnock River Pump Station and the WPCF Treatment Plant.

Programmed for FYE 19 are funds (\$11,000) to evaluate the lateral between Toll Gate and Poquonnock Roads for relining, (\$11,000) to evaluate grease reduction methods for the Northwest Interceptor, (\$237,000) for odor control improvements and Hydrogen Sulfide reduction in the collection system, (\$318,000) to reline damaged laterals in the Brookside Area, (\$106,000) for new closed circuit television camera and inspection vehicle, and (\$690,000) for a new combination vacuum/jet sewer cleaning and maintenance vehicle.

Programmed for FYE 20 are funds (\$595,000) to line damaged piping in various areas of the Northwest Interceptor.

Programmed for FYE 21 are funds (\$662,000) to evaluate and line damaged piping sections between the Beebe Cove and Mumford Cove pump stations.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: No impact

Sustainability Goals: Not applicable

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	O			22				22
B. Land and Right of Way								0
C. Construction	O		572	555	595	662		2384
D. Equipment	O			796				796
E. Other Costs	O	51						51
Total	O	51	572	1373	595	662	0	3253

*Funding

(C) Capital Reserve Fund

(G) General Obligation Bonds

(O) Other (WPCF User Fees)

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT
B) PUMP STATIONS	10) WATER POLLUTION CONTROL AUTHORITY

DESCRIPTION/PURPOSE/JUSTIFICATION

These projects have been approved by the Water Pollution Control Authority as part of their annual budget and are paid from the user fees collected. This project replaces worn out or outdated mechanical and electrical equipment located in the collection system's 22 pump stations. This also includes structural repairs to the facilities, replacement of underground and above ground fuel tanks and odor control.

Approved for FYE 16 were funds (\$213,000) to replace underground oil storage tanks with above ground tanks and (\$79,000) to replace the existing emergency generator in the Gravel Street pump station.

Requested for FYE 17 are funds (\$160,000) to replace critical operational valves at the following pump stations: Poquonnock River, Beebe Cove, Mumford Cove, Gravel Street, Goss Cove and Little Gibraltar. The valves' purposes include isolating wet wells, isolating pumps for repair/replacement, and isolating the pump station for emergency bypasses or other emergencies. The valves are original equipment and no longer serviceable or repairable.

Requested for FYE 17 are funds (\$161,000) to replace emergency generators at the Fieldcrest and Noank pump stations. The generators were obsolete, no longer being manufactured and replacement parts are difficult to procure. These generators power the pump stations in the event of loss of commercial power.

Requested for FYE 17 are funds (\$228,000) to replace an existing motor control center (MCC) two Flomatchers and two pump motors at the Poquonnock Bridge Pump Station. The current equipment is aged, obsolete and replacement parts are no longer manufactured.

Programmed for FYE 18 are funds (\$109,000) to replace the emergency generators at the Trails Corner and Lestertown Road pump stations and to install a new generator at the Burgess Park pump station.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: Energy savings

Sustainability Goals: Goal 1 (reduce overall energy use)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	O	65		117				182
B. Land and Right of Way								0
C. Construction	O	484	109	4855	521	457		6426
D. Equipment								0
E. Other Costs								0
Total	O	549	109	4972	521	457	0	6608

*Funding

(C) Capital Reserve Fund

(G) General Obligation Bonds

(O) Other (WPCF User Fees)

CAPITAL IMPROVEMENT PROGRAM PROJECT DETAIL (ADDENDUM)	
PROJECT	ACTIVITY/DEPARTMENT
B) PUMP STATIONS	10) WATER POLLUTION CONTROL AUTHORITY
ADDITIONAL INFORMATION	
<p>Programmed for FYE 19 are funds (\$4,704,000) for mechanical/electrical rehabilitation at the Poquonnock River, Goss Cove, Beebe Cove, Gravel Street, and Little Gibraltar pump stations and (\$117,000) for engineering, inspection, testing and design of structural repairs for the Little Gibraltar pump station. Also programmed for FYE 19 are funds (\$151,000) to replace the emergency generators at the Bridge Street, Little Gibraltar and Beach Road pump stations.</p> <p>Programmed for FYE 20 are funds (\$325,000) to replace communitors at the Goss Cove, Munford Cove, Beebe Cove, Gravel Street, and Little Gibraltar pump stations. Also programmed for FYE 20 are funds (\$196,000) to replace the emergency generators at the Goss Cove, Gravel Street, Country Glen and Tower Avenue pump stations.</p> <p>Programmed for FYE 21 are funds (\$331,000) to update and standardize instrumentation and controls at the Poquonnock River, Goss Cove, Mumford Cove, Gravel Street, and Little Gibraltar pump stations. Also programmed for FYE 21 are funds (\$126,000) to replace the emergency generators at the Brookview and Poquonnock Bridge pump stations.</p>	

CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL

PROJECT	ACTIVITY/DEPARTMENT
C) TREATMENT FACILITY	10) WATER POLLUTION CONTROL FACILITY

DESCRIPTION/PURPOSE/JUSTIFICATION

These projects have been approved by the Water Pollution Control Authority as part of their annual budget and are paid from the user fees collected. This project addresses the need to maintain the exteriors of the buildings as well as the interior structural components.

Approved in FYE 16 were funds (\$1,106,000) to install an above ground heating oil storage tank, replace the existing steam boiler with a hot water boiler, relocate the mechanics' workshop, and install a heat exchanger for the emergency generator.

Requested for FYE 17 are funds (\$158,000) for engineering and construction to replace the two remaining Flomatchers that control the two raw sewage pumps at the WPCF Treatment Plant. Flomatchers are archaic technology and failure during a storm event could result in sewer overflows. Also requested for FYE 17 are funds (\$393,000) for engineering and construction to rehabilitate primary clarifier #2 at the Treatment Plant. Failure of this equipment during high flow events would significantly impede the plant's ability to properly treat effluent thereby resulting in permit violations and potential fines.

Programmed for FYE 18 are funds (\$130,000) for inspection and repair of air relief valves, diffusers, manholes, and piping throughout the WPCF and (\$104,000) for updates to the Supervisory Control and Data Acquisition System. Programmed for FYE 19 are funds (\$1,699,000) to upgrade sludge processing, rehabilitate primary clarifier #1, rehabilitate primary clarifier #2, renovate and modernize the laboratory, and study installation of alternative disinfection systems.

Programmed for FYE 20 are funds (\$399,000) for a new equipment storage building, and to replace two obsolete aeration blowers.

Programmed for FYE 21 are funds (\$638,000) to install wireless control and data capture architecture, and remove the old incinerator and renovate the area for better energy efficiency and storage space.

Engineering: Consultant

Construction: Contractor

Impact on operating budget: Energy efficient boilers will reduce cost by decreased fuel use

Sustainability Goals: Goal 1 (reduce overall energy use)

RECOMMENDED FINANCING (000)

	Source of Funds*	Estimated Funding by Year						Total Estimated Cost
		FYE2017	FYE2018	FYE2019	FYE2020	FYE2021	FYE2022	
A. Planning and Engineering	O	50		11				61
B. Land and Right of Way								0
C. Construction	O	501	234	1688	399	638		3460
D. Equipment								0
E. Other Costs								0
Total	O	551	234	1699	399	638	0	3521

*Funding

(C) Capital Reserve Fund

(G) General Obligation Bonds

(O) Other (WPCF User Fees)